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THE MORAL MOSAIC: CHARACTERISTICS PREDICT LIKELIHOOD OF PERSONAL ETHICAL DECISIONS AND PROSOCIAL BEHAVIOR

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DEPARTMENT OF PSYCHOLOGY

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Abstract

This research provides a multidimensional approach to predicting unethical or prosocial behavior by identifying the underlying factor structure of 35 well-established scales linked to moral behavior. A novel measure of whether moral values have inherent meaning (Heavy-Light) was also included. Over 400 participants completed all 36 scales. Factor analysis yielded 6 factors: *moral agency*, *dogmatism*, *empathy*, *avoidant emotionality*, *lightness*, and *moral reductionism*. Using multiple regression, the 6 factors along with the Big 5 traits were tested as predictors of self-reported unethical behaviors and a single item measure of prosocial donation. *moral agency*, *dogmatism*, and *moral reductionism* negatively predicted unethical behavior, whereas *empathy* positively predicted prosocial donation. Additionally, *dogmatism* served as a negative predictor of prosocial donation. As a final step, a 105-item short-form measure of the 6 factors was created by selecting 3 items from each of the 36 scales. Both the long-form and short-form factor models explained more variance than the Big 5 personality traits in unethical behavior and prosocial donation. With further validation, this short-form *moral mosaic* may be useful as a multidimensional predictor of moral behavior.

The Moral Mosaic: Characteristics Predict Likelihood of Personal Ethical Decisions and Prosocial Behavior

One of the fundamental truths of social science is that influencers of human behavior do not exist in isolation. A vast array of stimuli and emotions are at work in the daily life of an individual and it is difficult to attribute their actions to one variable. Personality traits, emotions, and influences come with additional associated personality traits, emotions, and influences. However, when it comes to predicting moral behavior, many studies focus solely on the impact of highly specific personal characteristics. Looking across an exhaustive list of these studies, typically they investigated the behavioral implications of individual qualities such as guilt, awe, empathy, religiosity, or narcissism (Wolf, Cohen, Panter, & Insko, 2011; Dovidio, Schroeder & Allen, 1990; Perrin, 2000; Michel & Bowling, 2013; Piff, Dietze, Feinberg, Stancato, & Keltner, 2015).

Some researchers may go a step further and investigate if other related characteristics mediate or moderate the relationship between a specific variable and moral behavior (Glover, Bumpus, Logan, & Ciesla, 1997; Krumrei-Mancuso, 2017; Rua, Lawter, & Andreassi, 2016). Whereas the scope of these studies is larger than a single variable approach, it is still limited to an isolated set of predictors. Without offering a comprehensive model of moral predictors, they may miss out on the fundamental, underlying motivations behind moral actions.

One notable exception is the work of Cohen, Panter, Turan, Morse, and Kim (2014). These authors conducted a latent profile analysis to create three classes of participants based on their responses to over 24 broad and narrow traits. The classes were then used as predictors of counterproductive workplace behaviors (CWB) and organizational citizenship behaviors (OCB) in regression analyses. Herein, the class that strongly endorsed measures such as empathic concern, guilt-proneness, extroversion, honesty-humility, and moral identity, but weakly

endorsed shame-withdrawal, moral relativism, and narcissism were most likely to engage in OCB and least likely to engage in CWB. Conversely, those who engaged in the least OCB and most CWB belonged to a class that showed the opposite trait endorsement. However, this approach focused on clusters of participants rather than clusters of traits. As such, traits were grouped in a moral or immoral dichotomy.

The current study, on the other hand, emphasizes the underlying factor structure of a broad range of moral predictors. It seeks to establish a multifaceted approach to moral predictors by grouping them together based on their latent factors. By including associated traits in the analysis, a more realistic view of how characteristics promote or dissuade moral actions can be realized. Aside from being insightful, this approach is also highly practical. Herein, by using latent factors to as predictors, the need to select multiple possible moderators is greatly reduced. This method will also allow a researcher to test broad clusters of moral characteristics when it is difficult to predict *a priori* what scale will be most relevant to predicting a specific moral behavior.

While this study seeks to rectify a gap in the literature by taking a broader approach to moral predictors, it also aims to amend the common approach to moral behavior. Just as many studies use a single measure as a predictor, there is a tendency to define moral behavior broadly as voluntary behavior to help another (Patrick, Bodine, Gibbs, and Basinger (2018). With this broad view of prosocial behavior, many studies sought to determine the traits that comprised an altruistic personality type (Eisenberg et al., 2002). However, this approach often distorted the impact of certain personal characteristics and failed to consider the power of the situation (Patrick et al., 2018).

Indeed, recent studies have found that moral characteristics differ in the outcomes they predict. Penner and Finkelstein (1998) found that the traits of other-oriented empathy and helpfulness differed in the prosocial behaviors they predicted. Herein, other-oriented empathy was predictive of increased time volunteering and increased interaction with HIV-positive individuals for male participants, whereas helping behavior was only positively correlated with number of volunteer meetings attended for women. Furthermore, correlational analysis indicated that other-oriented empathy was associated with warmth, nurturance, and altruistic motivations. Conversely, helpfulness was associated with self-efficacy, confidence, competence, and dominance. These findings show that seemingly similar traits may have vastly different underlying motivations that may be expressed in different situations.

Sometimes context can be so powerful that an otherwise positive characteristic can be become a predictor of unethical behavior. Creativity, for instance, is generally seen as a positive attribute, because it is linked to increased organizational performance and greater problem solving. However, Gino and Ariely (2012) found that this trait is also positively correlated with self-reported likelihood of committing unethical workplace behaviors and increased cheating behaviors. Even traits that are viewed as overtly moral are not immune to the power of the situation. Although compassion is highly predictive of helping others in need, it also predicted graders giving inflated feedback to an individual who wrote a poor-quality essay (Lupoli, Jampol, & Oveis, 2017). Thus, the other-oriented concern of compassion may lead to prosocial lying if a person cares more about protecting an individual from negative affect than about giving accurate information. Because moral behavior can take many different forms, it is imperative that investigations into this outcome be highly specific. With this in mind, a long-

term goal of the present program of research will be to create a taxonomy of moral behaviors and contexts, showing the behavioral nuances that can result from moral mindsets.

Personal Characteristics

Focusing first on the underlying dimensions of characteristics that *predict* moral behavior, this study utilizes 35 established variables that are known or likely predictors, plus 1 novel measure that assesses belief in the inherent value of moral principles. Although these measures were selected on an *ad hoc* basis, they are all directly or indirectly related to moral behavior. Below, is a brief outline the measures selected for this study along with their associated behaviors. For sake of coherence, these measures have been loosely grouped into five broad categories: self-strategies, philosophical outlooks, self-awareness, ethical judgments, and affective states.

Self-strategies

Self-strategies encompass beliefs about the self and how it interacts with the world. Often these views are based on one's experiences and behaviors. As these beliefs become incorporated into one's identity, they form a self-schema. When an individual is aware of their self-schema, it can regulate their behavior and allow it to persist in a broad variety of contexts (Froming, Nasby, & McManus, 1998). Examples of self-strategies include need for cognition, self-control, personal need for structure, moral identity, perspective taking, and narcissism. These strategies provide identity and prescribe actions. For instance, moral identity (Aquino & Reed, 2002) represents the importance of moral qualities to an individual and how they ought to be expressed. This can take symbolic and internal forms, in which individuals express themselves using moral identifies or privately believe them to be important, respectively.

Moral identity is associated with increased prosocial acts such as volunteering and social involvement across a variety of contexts (Patrick, et al., 2018).

Need for cognition (NFC) and personal need for structure (PNS) are two opposing self-strategies used to describe mental processes. NFC describes the extent to which one desires to think deeply and seek out mental challenges. It allows for greater decision-making abilities and heightened moral cognition, which can allow an individual to be more agentic when they react to a situation (Strobel, Grass, Pohling & Strobel, 2017). As such, it has been linked positively to self-reported moral behaviors such as donating, helping, and consideration of others, even to slightly higher levels than moral identity and empathy. On the other hand, PNS captures the desire to structure and categorize experiences, so as to leave little room for doubt (Thompson, Naccarato, Parke &, Moskowitz, 2001). This trait has been linked to less thorough examination of information, higher judgmental confidence, and quicker response latencies when making decisions (Blais, Thompson, Baranski, 2005). Societal rules often provide such structure and prescribe clearly defined behaviors. (Neuberg & Newsom, 1993). Therefore, it would be predicted that individuals high in PNS would show a preference for following rules and guidelines.

Self-control and narcissism also allow individuals to make choices based on their self-beliefs, often with very different outcomes. Self-control encompasses the ability to regulate behavior, abstain from counterproductive behaviors, and engage in good citizenship behaviors (Zettler, 2011). It has been linked to higher grades, better adjustment, and lower levels of substance abuse (Tangney, Baumeister & Boone, 2004). Furthermore, Rua, Lawter, and Andreassi (2016) found that the relationship between internal moral identity and ethical behavior was fully mediated by self-control. From this, they concluded that self-control is necessary to

enact ethical desires. Narcissism, on the other hand, is characterized by a grandiose sense of self-importance, entitlement, poor responses to criticism, and exploitative behavior (Raskin & Hall, 1979). This trait is predictive of antisocial behaviors such as counterproductive workplace behaviors and dishonest reporting (Michel & Bowling, 2013). Additionally, McGregor, Nail, Kocalar & Haji (2013) found that after receiving praise, those high in narcissism were indifferent to the suffering of others.

Philosophical Outlooks

Another area from which behavioral prescriptions are derived is one's philosophical outlook. Common measures of philosophical outlooks include endorsement of free will, determinism, and religiosity. These outlooks are often shaped by one's culture and traditions and serve to shape one's beliefs, values, and behavioral prescriptions (Nilsson, 2014). For instance, Vohs and Schooler (2008) found that manipulating a deterministic mindset (the belief that behavior is wholly the result of genetic and environmental influences), increased cheating behavior. Conversely, Paulhus and Carey (2011) found that belief in free will was linked to a greater sense of moral responsibility and stricter morals. However, belief in free will was also associated with demand for harsher punishments after reading a vignette about a wrongdoer.

Religiosity also can shape a person's moral behavior, as most faiths include moral prescriptions in their doctrines. For instance, those who attended church and other religious activities, believed in an afterlife, and considered themselves born-again Christians were more likely to be honest when they had an opportunity to report receiving a higher grade than they deserved (Perrin, 2000). An additional study by Voert et al. (1994) found that regularly-attending church members showed a stricter moral outlook than those who attended on a marginal basis.

The present research also implements a novel measure related to philosophical outlook, highlighting individuals' beliefs about the inherent value of morals and principles. Although constructs such as moral identity (Aquino & Reed, 2002) assess the presence of moral traits (e.g., kind, honest) in the self-concept, they do not account for the extent to which one believes that moral principles are meaningful and important guidelines for behavior. The present research rectifies this gap by introducing the construct of *heavy* or *light* perspectives on life. A *heavy* approach is operationalized as the belief that moral principles matter, and one should strive to live up to them. Those who endorse this approach take life seriously and believe it has meaning. Conversely, a *light* approach was operationalized as the belief that moral principles really do not matter and can be compromised to meet everyday goals. Endorsers of this approach claim to view life as a game and believe it is too uncontrollable to contain meaning or purpose. This construct is likely to be a unique predictor of moral behavior because it considers whether one feels beholden to a moral code. As such, someone with a *light* approach may be entirely pragmatic when they act, having little regard for if their behavior fits within moral parameters. Unlike someone prone to moral disengagement, a person with a *light* approach would feel no need to justify their actions, as they are of little importance.

Self-Awareness

Self-awareness refers to the ability to understand one's emotions, strengths, limitations, values, and motives (Caldwell & Hayes, 2016). Common measures pertaining to this category are self-consciousness, mindfulness, impression management, self-deceptive enhancement, intellectual humility, and life-meaning. According to self-awareness theory, those who engage in self-awareness are more likely to evaluate and enact their principles daily (Abbate, Isgrò, Wicklund & Boca, 2006). One such component of self-awareness is the ability to be consciously

present to the experiences and events that take place in the moment, known as mindfulness (Brown, Ryan & Creswell, 2007). This trait is made up of one's capacity to describe external stimuli, act aware, observe the self, and remain collected under emotionally arousing circumstances. Together, these facets form a cohesive trait that is predictive of emotional intelligence, self-compassion, and self-control (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006; Bowlin & Baer, 2011).

Another aspect of self-awareness is the ability to monitor one's motives and self-presentation. The trait of self-consciousness taps into the abilities in its public and private domains. Private self-consciousness involves cognitive contemplation of the self, while public self-consciousness is concerned with the perceptions of their peers (Fenigstein, Scheier, & Buss, 1975). Glover et al., (1997) found that private self-consciousness plays a moderating role between *honesty-integrity* and self-reported ethical decisions on a series of vignettes. Aleassa, Pearson, and McClurg (2011) found that public self-consciousness was associated with lower video pirating when anti-piracy was congruent with attitudes of one's peers. Thus, public self-consciousness appears to be linked with moral behavior when it is congruent with social norms.

Stemming from public self-consciousness, individuals may inflate their qualities in an attempt to have good standing with their peers. Two methods of achieving this are impression management and self-deceptive enhancement. Impression management involves distorting one's responses to fit in with social norms, whereas self-deceptive enhancement is distorting one's responses to appear more skillful (Lalwani, Shrum & Chiu, 2009). Grant and Mayer (2009) found that impression management had a positive interaction with prosocial motives in predicting affable citizenship, yet it was not related to prosocial behavior when it could be damaging to their reputation. Self-deceptive enhancement, on the other hand, can take the form

of moral enhancement (Paulhus & John, 1998). Herein, individuals high in self-deceptive enhancement may exaggerate their moral qualities and downplay their antisocial ones.

The self-aware individual's desire to embody their attitudes and values can also serve as a motivation to search for and feel life meaning. The search for meaning in life has been significantly linked with the willingness to engage in sacrificial behavior for the sake of others (Dugas et al., 2016). However, high search for meaning has also been moderately linked with depression and neuroticism (Steger, Frazier, Oishi, & Kaler, 2006). Conversely, the present experience of meaning in life is associated with increased volunteerism and charitable donations (Klein, 2017). These individuals display more positive affect, fewer health risks, and tend to be more religious.

Although one can possess a sense of meaning in life from one's beliefs and values, an important aspect of self-awareness is the ability to recognize the limitations of one's perspective. This is accomplished through intellectual humility (Hoyle, Davisson, Diebels, & Leary, 2016). According to Krumrei-Mancuso (2017), intellectual humility had a positive relationship with altruism, benevolence, and prosocial values when mediated by gratitude and empathy.

Ethical Judgments

Before one can behave in an ethical fashion, one must first decide what constitutes moral behavior. As such, ethical judgments provide a value system by which an individual decides right from wrong (Nguyen & Bideman, 2008). Constructs that fit in this category include honesty-humility, dichotomous thinking, moral disengagement, and the moral foundations of harm, loyalty, fairness, authority, and purity. These dimensions of ethical judgment are a central step in determining if one will follow through with an ethical behavior (Septianto & Soegianto,

2016). Once such judgments have been fully internalized, they become a driving force for action.

Two modes of ethical judgment that have profoundly different consequences are honesty-humility and moral disengagement. With the advent of the HEXACO, Lee and Ashton (2004) added the personality factor of honesty-humility to the established list of Big Five traits (Goldberg, 1990). The honesty-humility factor is described as the dispositional tendency to be sincere, honest, faithful, modest, and fair, and serves as an established predictor of prosociality, social value orientation, and low cheating behavior (Hilbig, Glöckner, & Zettler, 2014; Hibig & Zettler, 2015). Conversely, moral disengagement is the propensity to divert responsibility from the self after committing an antisocial act. This is typically done through distorting consequences, blaming the victim, or making the act seem inevitable (Bandura, Barbaranelli & Caprara, 1996). Moral disengagement positively predicts self-reported unethical behavior and is negatively correlated with empathy and moral identity (Detert, Treviño, & Sweitzer, 2008).

Moral Foundations Theory posits that individuals base their moral frameworks upon the foundations of harm, fairness, loyalty, authority, and purity (Graham, Nosek, Haidt, Iyer, Koleva & Ditto, 2012). Herein, harm refers to the desire to abstain from behaviors that may hurt another and is associated with empathic concern, generosity, and pacifism (Johnson, Hook, Davis, Tongeren, Sandage & Crabtree, 2016). Fairness encapsulates the desire to establish mutual beneficence among all individuals and is linked to engagement in social justice egalitarian behavior (Johnson et al., 2016). Loyalty is the belief that alliances need to be made with a protective and loyal ingroup established (Johnson et al., 2016). Authority is the belief that adhering to the social hierarchy, obeying authority, and respecting tradition are moral obligations. Finally, purity is the belief that one should not engage in behaviors that are viewed

as revolting to most of the population and is often associated negative attitudes towards nontraditional sexual behaviors (Johnson et al., 2016). According to moral foundations theory, individuals endorse these five domains to varying degrees to create a personal moral framework (Graham et al., 2012). This framework determines what behaviors are viewed as moral or immoral and, thus, motivates an individual to act within these guidelines.

Finally, the rigidity by which one holds ethical judgments also impacts behavior. Dichotomous thinking occurs when an individual engages in thinking that is in terms of "good or bad," "black or white," and "all or nothing" (Oshio, 2009). These thought patterns allow individuals to quickly categorize information and make expedient decisions. However, it can also lead to antisocial outcomes. For instance, Dichotomous thinking has been associated with emotional regulation problems, decreased impulse control, and increased aggression (Oshio, Mileda, Mieda, & Taku, 2016). In fact, Zarkadi and Schnall (2013) found that simply priming black and white thinking led to harsher judgments towards drug users or adulterers. Dichotomous thinking is also associated with compartmentalization, which has been found to predict dishonest behavior (Thomas, 2012; Thomas 2015).

Affective states

Affect can also play a large role in determining moral behavior. The emotions one feels in a given situation can encourage or inhibit intervention. Such affective responses include guilt, shame, awe, compassion, empathic concern, personal distress, and optimistic denial. Wright, Cullum, and Schwab (2008) state that morally charged attitudes inspire higher levels of emotional intensity. This emotional intensity is then applied to the situation and the target. When attitudes are strong, the relationship between attitudes and behavior increases. As such, both trait and state affect can have a strong sway on an individual's behavior.

One such affective response is the proneness for guilt or shame. According to Tangney, Miller, Flicker, and Barlow (1996), guilt stems from negative, specific, and unstable attributions for one's behaviors after committing an action that one regrets, whereas shame is derived from assigning the negative attribution to oneself in the wake of committing a regrettable action. Moreover, guilt proneness is associated with fewer reported unethical business decisions, and less aggressive and antisocial behaviors. The negative behavior evaluation provided by guilt can serve as a motivator for reparative action, in which an individual strives to right their wrongs. However, when shame becomes great it can motivate an individual to withdraw from others, to act more aggressively, and to increase self-reported unethical business decisions (Wolf et al., 2011).

Dispositional positive emotions can also play a large role in motivating one to act in prosocial and helpful ways. Two such emotions are awe and compassion. Awe is the result of rapid attempts to accommodate the experience of novel, complex stimuli (Piff et al., 2015). This entails feeling small in the presence of something greater than the self, which allows one to place greater focus on others. Compassion is used to describe dispositional feelings of concern for others and the desire to care for them. Individuals high in compassion are more likely to engage in altruistic helping behaviors, but not punishing behaviors for wrongdoers (Weng, Fox, Hessenthaler, Stodola, & Davidson, 2015). This trend, however, may go so far as to value compassionate treatment of the individual over following rules (Lupoli et al., 2017).

Separate from dispositional affect, one's emotional state in response to seeing an unfortunate other can also serve as a motivating or inhibiting influence. Two such affective responses are empathic concern and personal distress. As defined by Davies (1982), empathic concern is the result of "other-oriented" feelings of concern and care for those in need, whereas

personal distress is the result of "self-oriented" feelings of anxiety and unease upon seeing someone in need. Those high on empathy displayed a greater likelihood of volunteering to help a stranger in need (Dovidio, Schroeder & Allen, 1990). However, because those high in personal distress act out of motivation to relieve their negative affect, they are less likely to help an individual if they can easily escape the situation (Batson, Fultz, & Schoenrade, 1987).

Another affective strategy emerges when an individual ignores threatening information so as to avoid emotionally distressing information. Thompson and Schlehofer (2008b) demark two such denial-based strategies. The first of these is *optimistic denial*, in which individuals ignore potentially harmful information, based on the assumption that such things could never happen to them. The other strategy is *avoidant denial*, in which an individual avoids harmful information in an effort to escape the associated negative feelings. Individuals who engaged in such denial strategies tended to have higher levels of neuroticism and anxiety. These strategies may also encourage less prosocial behavior, as avoiding threatening environments could reduce one's exposure to those in need (Piff, Kraus, Cote, Cheng, & Keltner, 2010).

Project Overview

The purpose of the current research is to identify and interpret the unique, latent factors that encompass these personal characteristics. This factor structure, referred to as the *moral mosaic*, should provide a novel approach to predicting and understanding moral behavior. Current factor approaches are not well suited to predicting moral behavior. For instance, the Big Five was not associated with deviant computer behaviors or sharing in economic games (Rogers, Smoak, & Liu, 2006; Ruch, Bruntsch, & Wagner, 2017). Although the HEXACO added the honesty-humility trait in an attempt to predict moral behavior, the moral choices predicted by this factor are limited to those tapping into the honesty-humility component of morality.

Additionally, while specific moral characteristics can be utilized for predicting moral behavior, the literature contains an exhaustive list of them. As such, it can be difficult for a researcher to select the measures to include *a priori*. By taking a factor-based approach solely comprised of moral characteristics, this study seeks to provide an efficient and broad model for predicting moral behavior, through reducing the three dozen aforementioned constructs to a manageable number of predictors. Additionally, building on the work of Penner and Finkelstein (1998), it is hypothesized that the type of moral behavior will influence the predictivity of the factors. Finally, if the *moral mosaic* appears to have merit, this study will endeavor to create an efficient way of measuring each factor for expedient assessment.

In order to accomplish these goals, the present work involved four steps of analysis, presented here in four sections. Study 1A establishes the *moral mosaic* through an exploratory factor analysis using a sample of 400 participants. Study 1B utilizes the generated factors to predict moral behavior on 2 sample outcome measures, namely indices of unethical decision making and prosocial donation. Study 1C creates a short-form measure for each factor of the *moral mosaic*. Study 1D uses the short-form factors to predict the same outcomes as Study 1B, so as to compare the predictive power of the two models.

Study 1A: Establishment of a Factor Model

The first goal of this study is to identify the factor structure that best represents the battery of moral predictors outlined above. This should establish a multidimensional model that identifies moral characteristics on a grander scale than does the single measure approach. This study was exploratory in nature and no hypotheses were generated regarding the underlying factor structure.

Method 1A

Participants

Participants were 500 undergraduates enrolled in introductory psychology courses at the University of Oklahoma over the course of two semesters. Of those who participated, 449 undergraduates (333 female) completed the survey and prerequisite mass survey to a degree that could be utilized for analysis. This sample had an average age of 18.70 years (*SD*=1.56) and was 76.2% White, 8.0% Asian, 5.3% Hispanic, 4.5% Black, 4.0% American Indian or Native American, 1.8% other, and 0.2% Native Hawaiian. Students volunteered to partake in the study in exchange for research exposure credit.

Measures

Because the number of participants available was not guaranteed, 35 measures were selected. This allowed for a minimum of 350 participants in order to keep a ratio of 10 participants per variable. In doing so, the number of variables were limited in this study. Although these measures were selected in an *ad hoc* fashion, the goal was to select measures that are indirectly or directly related to moral behaviors. To this end, the measures included known predictors of dishonest behavior such as scientific determinism, moral disengagement, and narcissism (Paulhus, & Carey, 2011; Detert, Treviño, & Sweitzer, 2008, Raskin & Hall, 1979). Traits were also chosen that have been associated with honest and prosocial behaviors such as negative behavior evaluation, honesty-humility, compassion, and empathy (Wolf et al., 2011; Dovidio, Schroeder & Allen, 1990; Hilbig, Glöckner, & Zeltner, 2014; Weng et al., 2015). Other selected traits were more indirectly related to moral behaviors or exhibited characteristics

consistent with a moral mindset, such as mindfulness, meaning in life, and self-consciousness (Brown et al., 2007; Glover et al., 1997; Steger, Frazier, Oishi, & Kaler, 2006).

Listed below are 22 scales which provided 35 measures for the analysis. To keep the number of measurements to a reliable number for the given sample, some closely related subscales were either dropped or combined to form a global measure. The scales are listed in alphabetical order, and each description includes the number of items, a sample item, and the reliability statistic

Balanced Inventory of Desirable Responding *(Paulhus, 1994).* Participants indicated the extent they agreed to 40 statements as on a scale of 1(strongly disagree) to 7 (strongly agree). Half of the items on this scale measured self-deceptive enhancement, while the other half measured impression management. A sample item for self-deceptive enhancement is "I am a completely rational person," $\alpha = .635$. A sample item for impression management is "I always obey laws, even if I'm unlikely to get caught," $\alpha = .785$.

Brief Self-Control *(Tangney Baumeister, & Boone, 2004*). Participants responded how true of them were 13 items on a scale of 1(not at All) to 5 (very Much). A sample item is "I am able to work effectively toward long-term goals," $\alpha = .823$.

Dichotomous Thinking Inventory *(Oshio, 2009).* Participants responded to 15 statements on a scale of 1(strongly disagree) to 6(strongly disagree). This scale contained three subscales, each consisting of five items: preference for dichotomy, profit and loss thinking, and belief in dichotomy. However, profit and loss thinking: "I prefer to classify information as being useful or useless for me," was not analyzed because it's focus on perception of information and lacked the prescriptive implications of the other two subscales. A sample preference for

dichotomy item is "It works out best when even ambiguous things are made clear-cut," α = .711, whereas a sample item for belief in dichotomy is "There are only 'winners' and 'losers' in this world," α = .801.

Dispositional Positive Emotions Scale *(Shiota, Keltner, & John, 2006).* Participants responded to 38 statements on a scale of 1 (strongly disagree) to 7 (strongly agree). This scale measures seven positive emotions: joy, pride, love, awe, content, amusement, and compassion. However, the present analyses used only the awe and compassion subscales. A sample item for Compassion is "When I see someone hurt or in need, I feel a powerful urge to take care of them," α = .850. A sample item for awe is "I feel wonder almost every day," α = .760.

Five Facet Mindfulness (Short Version) *(Bohlmeijer, Klooster, Fledderus, Veehof, & Baer, 2011).* Participants responded how true of them 24 statements were on a scale of 1 (never or rarely true) to 5 (very often or always). This scale was designed to measure mindfulness across the five different facets. Sample items of the describe facet include, "I'm good at finding words to describe my feelings." Non-react items include "I watch my feelings without getting carried away by them." Nonjudgment items include "I make judgments about whether my thoughts are good or bad," (R). Items assessing the observe component include "I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow." Awareness items include, "I find myself doing things without paying attention," (R). For this analysis, these facets were combined to form a global measure of mindfulness, α = .778.

Free Will and Determinism Plus Scale *(Paulus & Carey, 2011).* Participants were asked to indicate how strongly they agreed with 25 statements on a scale of 1(strongly disagree) to 5 (strongly agree). Although this scale measured four outlooks: free will, scientific determinism, fatal determinism, and uncertainty, the present study focused on free will and scientific

determinism, as these two beliefs have been linked to moral behavior. A sample item for free will is "People have complete control over the decisions they make," α = .714. A sample item for Scientific Determinism is "Your genes determine your future," α = .614.

Guilt and Shame Proneness *(Wolf, Cohen,, Painter, & Insko, 2011).* Participants were asked to rate how likely they would be to behave in the manner depicted across 7 scenarios on a scale of 1 (very likely) to 7 (very likely). Three items were used to measure shame-withdrawal, while four items were used to measure negative behavior evaluation (guilt). A sample item for guilt is "You lie to people, but they never find out about it. What is the likelihood that you would feel terrible about the lies you told?" α = .734. A sample item for shame-withdrawal is "A friend tells you that you boast a great deal. What is the likelihood that you would stop spending time with that friend?" α = .684.

Heavy-Light Measure *(Bell & Showers, 2019a).* Participants answered two questions assessing if they thought morals and principles had meaning. The two-item structure of this measure was based on numeracy assessment, which also utilizes a 2-item index with good validation (Cokely, Galesic, Schulz, Ghazal, & Garcia-Retamero, 2012). This scale appears in its entirety in Appendix A.

HEXACO *(Lee & Ashton, 2004).* Participants endorsed 60 statements, assessing honesty-humility, extroversion, agreeableness, conscientiousness, openness, and emotionality, on a scale of 1(strongly disagree) to 6 (strongly agree). However, only the 10-item, honesty-humility component of this scale was analyzed for this section, as the traits representing the Big 5 were not expected to be relevant to moral behavior. A sample item for this measure is "I'd be tempted to use counterfeit money, if I were sure I could get away with it," (R) α = .729.

Interpersonal Reactivity Index (Short Version) *(Ingoglia, Coco, & Albiero, 2016).* Participants responded how well 16 items described them on a scale of 1(does not describe me at all) to 5 (describes me very well). This scale brief form was utilized questions from the 28-item scale originated by Davis (1996). For this study, fantasy items such as, "When I watch a good movie, I can easily put myself in the place of the main character," were not analyzed, as they were not expected to be relevant. A sample item for personal distress is "In emergency situations, I feel apprehensive and ill-at-ease," $\alpha = .721$. A sample item for empathic concern is "When I see someone being taken advantage of, I feel kind of protective toward them," $\alpha = .765$. A sample item for perspective taking is "Before criticizing somebody, I try to imagine how I would feel if I were in their place," $\alpha = .791$.

Meaning in Life *(Steger, Frazier, Oishi, & Kaler, 2006).* Participants responded how true of them 10 statements were on a scale of 1 (absolutely untrue) to 7(absolutely true). Presence of meaning in life and search for meaning in life were measured using five items, each. A sample item for presence of meaning is "My life has a clear sense of purpose," $\alpha = .872$. A sample item for search for meaning is "I am always searching for something that makes my life feel significant," $\alpha = .892$.

Moral Disengagement *(Detert, 2016).* Participants responded the extent to which they agreed to 12 statements on a scale of 1(strongly disagree) to 5 (strongly disagree). Moral disengagement was based on the four subscales. The moral justification subscale included items such as "It is all right to fight to protect your friends." The euphemistic language subscale included "Looking at a friend's homework without permission is just 'borrowing it''. Items on the distortion of consequence subscale included "Teasing someone does not really hurt them." The attribution of blame subscale included "People who are mistreated have usually done things

to deserve it." These subscales were combined to form a global measure of moral disengagement for this study, α = .792.

Moral Judgment Scale *(Graham, Haidt, & Nosek, 2009).* For this measure, 13 items were selected that were least politically divisive. Participants s endorsed these statements on a scale of 1(strongly disagree) to 6 (strongly agree). Harm was assessed using 3 items, including "If I saw a mother slapping her child, I would be outraged," α = .567. Fairness was assessed using 2 items, including "When the government makes laws, the number one principle should be ensuring that everyone is treated fairly," α = .222. Loyalty was assessed using 2 items, including "If I knew that my brother committed a murder, and the police were looking for him, I would turn him in," α = .164. Authority was measured using three items, including "When the government makes laws, those laws should always respect the traditions and heritage of the country," α = .687. Purity was assessed using 3 items, including "I would call some acts wrong on the grounds that they are unnatural or disgusting," α = .652.

Narcissism (short form) *(Gentile et al., 2013).* This 13-item scale gave participants two options and asked them to choose the statement that most reflected their attitudes. Three subscales were contained in this measure. Items for the leadership- authority subscale included "I have a strong will to power." The grandiose-exhibitionism subscale included "I like to display my body." A sample item for the exploitative- entitlement subscale is "I insist on getting the respect that is due me." These three subscales were combined to form a global measure for narcissism, α = .678.

Need for Cognition *(Cacioppo & Petty, 1982).* Participants responded to 18 statements on a scale of 1 (very strong disagreement) to 9 (very strong agreement). A sample item for this scale is "I really enjoy a task that involves coming up with new solutions to problems," α = .899.

Personal Need for Structure *(Thompson, Naccarato, & Parker, 1992).* Participants endorsed 12 statements on a scale of 1(strongly disagree) to 5 (strongly agree). A sample item for this scale is "I become uncomfortable when the rules in a situation are not clear," $\alpha = .792$.

Religious Influence *(Sethi & Seligman, 1993).* Participants responded to this subscale from the religiousness measure by answering 6 questions on a 7-point scale, with varying endpoints depending on the question. A sample item for this scale includes "How much influence do your religious beliefs have on the important decisions in your life?" $\alpha = .812$.

Self-Consciousness Scale *(Fenigstein, Scheier, and Buss, 1975).* Participants responded to 23 statements on a scale of 1(extremely uncharacteristic) to 5 (extremely characteristic). Public self-consciousness was measured using seven items, including "I'm concerned about the way I present myself," $\alpha = .777$. Private self-consciousness was measured using 10 items, including "I'm constantly examining my motives," $\alpha = .650$. The anxiety subscale of this measure was not analyzed, due to its similarity with other measures of anxiety used in this study.

Self-Importance of Moral Identity *(Aquino & Reed, 2002).* Participants read a series of moral adjectives: caring, compassionate, fair, friendly, generous, helpful, hardworking, honest, and kind. They then responded to 13 statements about how a person with these characteristics should act on a scale of 1(strongly disagree) to 5 (strongly agree). This scale measures two components of moral identity. Items measuring internalization include "Having these characteristics is an important part of my sense of self," whereas symbolization items include "I am actively involved in activities that communicate to others that I have these characteristics." These two subscales were collapsed to form a global measure of moral identitity, $\alpha = .764$.

Specific Intellectual Humility *(Hoyle, Davisson, Diebels, & Leary, 2016).* Participants responded to nine statements on a scale of 1(Not at all like me) to 5 (Very much like me). For this study, *human nature* was the topic. A sample item is "My views about human nature may change with additional evidence or information," $\alpha = .869$.

Threat Orientation Scale *(Thompson & Schlehofer, 2008a).* Participants responded to 20 statements on a scale of 1(strongly disagree) to 7(strongly agree). Avoidant denial had 10 items, including "Hearing information about threats makes me more stressed, so I avoid it," $\alpha = .868$. Optimistic denial also contained 10 items, including "There is no point in worrying about possible threats when they might not even happen to me," $\alpha = .857$.

Procedure

Participants enrolled in Introductory Psychology courses at the University of Oklahoma during the Fall 2017 and Spring 2018 semesters voluntarily signed up to participate in this single session, online study from a list of studies being offered for course credit. Those who selected to take part in this study were emailed a Qualtrics online survey link. Once participants clicked the link and signed the waiver of informed consent, they had 24 hours to complete the study. Depending on condition, there were 363-368 items in total, and participants were told that the study would take up to 90 minutes to complete

Across the collection period, this survey took three main forms based on the placement of two measures that were not used in the present study. A measure known as the donna task varied slightly across waves and appeared as the fifth measure in waves 1 and 2 and as the final measure before demographics in wave 3. Additionally, the brief mood introspection scale

(Mayer & Gaschke, 2013) served as the ninth measure in wave 1 but was not included in waves 2 or 3. The order of measures in each wave can be seen in Table 1.

To ensure that the number of measures placed in the online survey was not too taxing for participants to answer reliably, some measures were placed in a mass survey session offered to the entire research pool in exchange for credit at the beginning of each semester. This mass survey contained the moral identity questionnaire (Aquino & Reed, 2002), the religious influence subscale of the religiousness measure (Sethi & Seligman, 1993), dichotomous thinking inventory (Oshio, 2009), dispositional positive emotion scale (Shiota, Keltner, & John, 2006), and selected questions from the moral justification scale (Graham, Haidt, & Nosek, 2009). These measures were chosen because they were straightforward, allowing students to respond with little introspection. This would ensure that responses could be accurate, as they completed many surveys on various subjects.

Results 1A

All 35 measures were factor analyzed, using a maximum likelihood extraction with a promax rotation. Before the factors were generated, a Kaiser-Meyer-Olkin (*KMO* = .797) and Bartlett's Test of Sphericity (*BTS* = 4933.993, $p = .000$) indicated the data were appropriate for such analyses. The scree plot of this analysis shows that after six factors, subsequent extractions approached eigenvalues of one (Figure 1). Therefore, a six-factor solution was utilized.

In this model, Factor 1 contained narcissism (R), honesty-humility, moral disengagement (R), dichotomous belief (R), scientific determinism (R), self-control, and fairness. Factor 2 contained religious influence, purity, authority, presence of meaning in life, specific intellectual humility, moral identity, and loyalty. Factor 3 contained compassion, awe, harm, empathic

concern, perspective taking, and search for meaning in life. Factor 4 contained personal distress, low need for cognition, shame-withdrawal, low mindfulness, and avoidant denial. Factor 5 contained self-consciousness (R), optimistic denial, low heaviness, and lightness. Factor 6 contained self-deceptive enhancement, impression management, free will, personal need for structure, and preference for dichotomy. This six-factor extraction model explained 49.26% of the variance and had eigenvalues of 5.199, 3.699, 3.401, 2.337, and 1.599, and 1.500, respectively. Table 2 shows the loading for each measure.

. To ensure this model adequately fit the data, goodness of fit tests were conducted for 5, 6, and 7 factor extractions models. Table 3 displays the goodness of fit tests for each model. Although the Chi Square value is significant for each extraction model, this is due to the large sample size and is not a reflection of model fit. According to the RMSEA values, the 5-factor model adequately fit the data, while the 6 and 7 factor models indicated good fit. Although the 7 factor model indicated slightly better fit than the 6 factor model, the factors were less interpretable. Therefore, the 6-factor model was retained, in congruence with the scree plot. Although the 6 factor extraction allows for an interpretable multi-factor solution, results are considered preliminary until a confirmatory factor analysis is conducted.

Discussion 1A

The purpose of this first step was to identify the latent factors underlying 35 relevant measures. Table 2 displays the results of this analysis. Collectively, these six factors are referred to as *the moral mosaic*. Listed below is the name each factor and an interpretation of what it represents.

Factor 1 (Moral Agency). The first factor was named *moral agency* because a major component of it is taking ownership for one's actions. Scientific determinism, moral disengagement, narcissism, and dichotomous belief allow an individual to deflect responsibility through placing blame on genetics, downplaying consequences, or denigrating the value of others. According to Bandura, Barbaranelli, Caprara, and Pastorelli (1996), when the target of an action is dehumanized or made to appear blameworthy, the perpetrator is less likely to feel guilt for their action. Negative loadings of these traits would dictate abhorrence to the thought of mistreating others and feelings of guilt upon acting antisocially. As such, *Factor 1 (Moral Agency)* represents caring about the effect one's actions have on others and taking responsibility for them.

Factor 2 (Dogmatism). The second factor was named *dogmatism* because the characteristics that comprise it are indicative of a conservative value structure, with little openness to other perspectives. The relationship between religion and the binding moral foundations of authority, loyalty, and purity has been strongly established by previous studies established (Graham and Haidt, 2010). Religions often create communities that are bound by beliefs and moral prescriptions. As such, these communities value group loyalty, respect for hierarchy, and reputational purity. Krumrei-Mancuso (2018) found that religion was associated with lower amounts of intellectual humility, however this link was nearly all accounted for by authoritarianism. This value for authority may account for the dogmatic belief that outside perspectives are wrong, which would, in turn, give one confidence and purpose.

Factor 3 (Empathy). The third factor, named *empathy*, includes multiple traits that represent care for the wellbeing of others. Variables that load positively on this factor are indicative of a drive to help those in need and see things from their perspective. Empathic

concern, compassion, and the moral foundation of harm stem from other-oriented feelings, which often motivate an individual to intervene on behalf of another (Davies, 1982; Wing et al., 2015; Johnson et al., 2016). As such, putting more focus on the welfare of others, often entails a smaller sense of self, which has been associated with awe (Piff et al., 2015). This smaller sense of self is also reflected in the indicators of perspective taking and search for meaning.

Factor 4 (Avoidant Emotionality). *Avoidant emotionality* represents a tendency to become easily overwhelmed in the face of difficult stimuli. Herein, this factor includes the components both of emotion suppression and of the tendency to feel negative emotions intensely. Although this may seem paradoxical at first, studies have shown that efforts to suppress emotions often lead to higher arousal (Pepping, O'Donovan, Zimmer-Gembeck, & Hanisch, 2014; Wenzlaff & Wagner, 2000). Additionally, an established link between emotional distress and low mindfulness exists (Pepping et al., 2014). Because mindfulness promotes flexibility in the cognitive, affective, and behavioral spheres, those low on it may not be able to find proper coping strategies. Such individuals may be likely to leave situations that could lead to emotional distress instead of intervening (Batson et al., 1987).

Factor 5 (Lightness). *Lightness* is indicative of not taking oneself or one's actions seriously. The two established measures for this factor are low self-consciousness and high optimistic denial. According to Brinthaupt and Lipka (1992), self-consciousness is derived from self-awareness and preoccupation with oneself. As such, low self-consciousness is indicative of lower rates of self-thought and introspection. Not dwelling on the self could lead to a lack of clearly defined, guiding morals or principles. Without inwardly derived rules, one could begin to treat life as a game and have no sense of moral expectations to live up to. This lack of reflection

on the self is also consistent with optimistic denial, in that a person will not dwell on the possibility of bad things happening to them or because of them.

Factor 6 (Moral Reductionism). The sixth and final factor, *moral reductionsim*, represents the tendency to simplify information to make it easily interpretable. For instance, PNS and preference for dichotomy are associated with the desire to classify stimuli into clear categories (Oshio, 2009; Thompson et al., 2001). However, the inclusion of self-deceptive enhancement and impression management indicate that this classification is not limited to outside information. Herein, individuals who endorse *moral reductionism* may also strive to simplify information about themselves, by downplaying their negative characteristics and emphasizing their positive ones (Lalwani, Shrum & Chiu, 2009; Paulhus & John, 1998). In doing so, an individual may also inflate how much agency they have, which could lead to a greater endorsement of free will. This approach may serve as a coping mechanism as placing oneself and external stimuli in neatly defined categories allow one to ignore complicated information.

Study 1B

Using the framework created by Study 1A, this study tests the six factors as behavioral predictors. However, the number of measures included in the *moral mosaic* limited the scope of moral behaviors that could be explored. For this reason, there was room to include only two self-report measures of ethicality and prosociality as preliminary outcomes. Although these are not definitive measures, they tap into two distinct domains of morality. With this in mind, Step 2 of the analyses had two goals. First, it investigates the predictiveness of the *moral mosaic* for two distinct contexts - ethical decisions and prosocial behavior. Secondly, it tests how the

predictiveness of these six factors compares to the well-known Big 5 characteristics – openness, conscientiousness, extraversion, agreeableness, and emotionality.

Moral Behavior

The first behavioral context is ethical decision making. In their review of ethics in organizations, Treviño, Weaver and Reynolds (2006) define ethical behavior as actions that are judged by socially acceptable moral norms. These actions typically reach a minimal moral standard prescribed by the law, a company, or social norm. Ethicality requires acts of commission, such as properly disposing of materials, and acts of omission, such as resisting the temptation to steal supplies from the company (Hannah, Avolio, & Walumbwa, 2011). Unethical behaviors arise when moral self-regulatory processes are deactivated, and individuals give into selfish desires (Detert, Treviño, Sweitzer, 2008). Such behaviors are often detrimental to institutions or other individuals.

Prosocial behavior, on the other hand, is a subset of ethical behavior that occurs when an individual strives to care for and help others in need (Hannah et al., 2011; Eisenberg et al., 2002). According to Dunfield (2014), these behaviors rely on three steps. First, an individual must be able to recognize that someone is dealing with a problem. Second, they must determine the source of the problem, and, finally, be motivated to help the other overcome the problem. These behaviors often go beyond adhering to ethical prescriptions and require an individual to go above and beyond what is expected. Dunfield (2014) specifies three subtypes of prosocial behaviors-helping, sharing, and comforting. These behaviors are inspired by seeing an individual in need of instrumental need, material desire, and emotional distress, respectively.

Hypotheses

Because the factor structure established in Study 1 A was unknown at the time of data collection, this study was exploratory in nature. As such, three broad hypotheses were formed before conducting the present step of the analyses. First, the factors established by the *moral mosaic* should be relevant predictors of moral behavior. Secondly, the predictive power of the factors should differ across different contexts of moral behavior. Herein, some factors should be more predictive of ethicality while others should be more predictive of prosociality. Because only two moral outcomes were utilized, it was also possible that certain factors could predict both or none. Thirdly, the *moral mosaic* should explain more variance than the openness, conscientiousness, extroversion, agreeableness, and emotionality traits, commonly used to predict behavior. However, because they lack a moral focus, it is predicted that they will not be able to account for subtle, contextual differences in moral behavior.

Method 1B

Participants

This study was collected using the same 449 participants described in Study 1A.

Predictors

Moral Mosaic Factors. The six factors obtained in Study 1A – *moral agency, dogmatism, empathy, avoidant emotionality, lightness*, and *moral reductionism* -- served as predictors at this step. A factor score for each factor score was computed by standardizing the respective indicator variables and averaging them together. Variables that loaded negatively onto a factor were reverse scored before standardization.

HEXACO *(Lee & Ashton, 2004).* The five remaining factors of the HEXACO were used as comparative predictors to the *moral mosaic* for the two outcome variables. Each factor was assessed using 10 items. A sample item for openness is "I think that paying attention to radical ideas is a waste of time," (R) α = .794. Items assessing conscientiousness include "I make a lot of mistakes because I don't think before I act," (R) α = .782. A sample item for extraversion is "The first thing that I always do in a new place is to make friends," α = .779. A sample item for agreeableness is "I am usually quite flexible in my opinions when people disagree with me," α = .743. Emotionality items include "I sometimes can't help worrying about little things," α = .829.

Due to the limitation on number of measures that could be administered, the HEXACO factors served as stand-ins for the Big Five Personality Inventory, as these two measures share a great deal of similarity with one another (Ashton, Lee, & de Vries, 2015). The extroversion, conscientiousness, and openness factors are largely the same across both scales and can be used relatively interchangeably. However, the HEXACO's agreeableness and emotionality factors exhibit some marked differences from their respective Big Five scales. For instance, the HEXACO form of emotionality removes the anger related components of the Big Five's neuroticism assessment and replaces them with the sentimentality items that were part of Big Five's agreeableness factor. Conversely, the Agreeableness factor of the HEXACO removes the sentimentality component from Big Five's version and replaces them with low scores on the anger-related aspects that are part of the Big Five's neuroticism scale. In doing so, the variance covered by both scales remains the same, but the focus of the factors undergoes small shifts. When comparing these HEXACO factors to their respective Big Five factors, Ashton et al. (2015) found that the HEXACO factors of extraversion, conscientiousness, and openness correlated with their Big Five counterparts at .74, .70, and .76, respectively. The Emotionality

factor of the HEXACO correlated with the Big Five's neuroticism at .55. Agreeableness shared a correlation of .52 between both scales. Ruch, Bruntsch, & Wagner (2017) also used these facets of the HEXACO as stand-ins for the Big Five in predicting economic game outcomes.

Outcomes

Unethical Decision-Making Questionnaire *(Detert, Treviño & Sweitzer, 2008).* Participants read eight vignettes in which they took the place of an individual who behaved unethically. For each vignette, they responded how likely they would be to engage in the behavior depicted on a scale of 1 (not at all likely) to 7 (highly likely). This measure appears in *Appendix B.* The eight items were averaged together to form as a measurement of unethicality, $\alpha = .746$. This yielded a mean score of 3.97 ($SD = 1.07$).

The unethical decision-making questionnaire has been utilized by Piff et al. (2015) as an outcome measure in support of their model that awe induction leads to a small self and moral behavior. Additionally, Detert et al. (2008) found that individuals scoring high on this scale were more likely to keep money that was not rightfully theirs.

Donation Scenario **(***Bozeman, 2015).* The second outcome measure assesses participants' willingness to engage in prosocial behavior. Participants reported their likelihood of donating money to a homeless woman with two children sitting outside a local convenience store. Responses were on a scale ranging from 1 ("very unlikely") to 7 ("very likely"). The average score for this item was 4.75 ($SD = 1.60$). For full text of this measure, see *Appendix C.*

This item came from Bozeman (2015) as an outcome measured used to measure the prosocial effects of attachment and self-esteem. It is based on a measure cited in Mikulincer,

Shaver, Gillath, & Nitzenberg (2005) in which participants read the story of a woman adversely affected by the closure of a foodbank and responded how likely they would be to help.

Procedure

No additional data were collected for this study. The additional measures utilized for this study were part of the survey described in Study 1A, using the same participants. Decision Making was the sixth scale appearing in the protocol for the first two waves and the fifth scale in the protocol for the third wave. In each wave, the donation scenario directly preceded unethical decision making. Table 1 shows the order of measures.

Results 1B

Unethical Decision Making

Model 1. The first regression model utilized for this study entered all six factors simultaneously in step 1, with each significant interaction between the factors being entered in subsequent steps. This regression analysis appears in Table 3. Together, these six factors explained approximately 27% of the variance in self-reported unethical decision making, R^2 = .273, $F(6, 442) = 27.67$, $p = .000$. *Factor 1 (Moral Agency)* was the largest, negative predictor of unethical behavior, $\beta = -.497$, $t(442) = 10.90$, $p = .000$. *Factor 2 (Dogmatism)* and *Factor 6 (moral reductionism)* also served as negative predictors, $\beta = -.105$, $t(442) = 2.517$, $p = .013$; $\beta = -.110$, $t(442) = 2.414$, $p = .016$. *Factor 3 (Empathy)*, *Factor 4 (Avoidant Emotionality)*, and *Factor 5 (Lightness)* were not significant predictors. In a second step, one interaction entered

into the model, $\Delta R^2 = .013$, $F(1, 441) = 25.243$ $p = .005$. This interaction, between *Factor 2 (Dogmatism)* and *Factor 5 (Lightness),* wherein those low in dogmatism and high on lightness are more likely to behave unethically, appears in Figure 2, $\beta = -.116$, $t(441) = 2.839$ $p = .005$.

Model 2. A second regression analysis tested how the *moral mosaic* compared to the traditional predictors - openness, conscientiousness, extroversion, agreeableness, and emotionality. Herein, the moral mosaic factors entered the equation simultaneously in the first step, and each significant Big 5 trait entered the equation in subsequent steps. Significant interactions between the moral mosaic factors were then entered. Table 4 displays this analysis. Here, openness entered the equation in step two and explained an additional 0.8% of the variance, $\Delta R^2 = .008$, $F(1, 440) = 24.574$, $p = .028$.

Model 3. This regression analysis entered all Big Five traits in step 1 and then added each significant moral mosaic factors into the regression equation in subsequent steps.. This approach controlled for common predictors and revealed the unique contribution of the *moral mosaic*. This regression appears in Table 5. Step one of this equation explained 10.6% of the variance, $R^2 = .106$, $F(5, 442) = 10.459$, $p = .000$. Three factors from the *moral mosaic* entered into this equation as additional predictors. *Factor 1 (Moral Agency)* entered the equation in the second step, $\Delta R^2 = .146$, $F(1, 441) = 24.698$. $p = .000$. *Factor 2 (Dogmatism)* entered the equation in a third step, $\Delta R^2 = .021$, $F(1, 440) = 23.552$, $p = .000$. *Factor 6 (moral reductionism)* entered the equation in a fourth step, $\Delta R^2 = .011$, $F(1, 439) = 21.682$, $p = .011$.

Donation Scenario

Model 1. Step 1 of this analysis explained 10.8% of the variance in donation likelihood, $R^2 = 0.108$, $F(6, 442) = 8.906$, $p = .000$. *Factor 3 (Empathy)* was the only positive predictor of

this behavior, β = .302, t(442) = 5.935, p = .000. However, *Factor 2 (Dogmatism)*, served as a negative predictor β = -.091, t(442) = 1.960, p = .051. No other factors were significant predictors. The second step contained the interaction between *Factor 2 (Dogmatism) and Factor 3(Empathy)*, β = -.110, t(441) = 2.43, p = .015. This interaction, wherein those low in *dogmatism* and high in *empathy* were more likely to donate, explained an additional 1.2% of the variance in donation likelihood, ΔR^2 = .012, F(1, 441) = *8.562*, p = .015. The third step contained the interaction between *Factor 1 (Moral Agency)* and *Factor 4 (Avoidant Emotionality)*, β = -.097, t(440) = 2.124, p = .034. This interaction, wherein those high in both *moral agency* and *avoidant emotionality* were least likely to donate, explained an additional 0.9% of the variance, ΔR^2 = .009, F (1, 440) = 8.115, p = .034. The fourth step contained the interaction between Factor 5 (Lightness) and Factor 6 (Moral Reductionism), β = -.096, t(439) = 2.121, p = .034. This interaction, wherein those high in *moral reductionism*, but low in *lightness*, were more willing to donate, also explained an additional 0.9% of the variance, ΔR^2 = .009, F(1, 439) = 7.771, p = .034. Table 3 shows the regression results. Figure 3 plots interactions between factors.

Model 2. In the first comparative regression, extroversion entered the equation as a significant predictor when controlling for the *moral mosaic*. This explained an additional 1% of the variance for donation likelihood, ΔR^2 = .010, F(1, 441) = *8.389*, p = .029. Table 4 shows the results of the regression.

Model 3. When entered in the first step, openness, conscientiousness, extroversion, agreeableness, and emotionality collectively explained 2.9% of the variance in donation likelihood, R^2 = .029, F(5, 442) = 2.678, p = .021. Empathy was the only moral mosaic factor to

enter into the equation. It explained 8.9% of the variance for this outcome, $\Delta R^2 = .089$, F (1, 441) = *9.825*, $p = .000$. This model appears in Table 5.

Discussion 1B

There are notable results when looking at the predictive outcomes of the moral mosaic factors. *Factor 1 (Moral Agency)*, *Factor 2 (Dogmatism)*, and *Factor 6 (Moral Reductionism)* negatively predicted unethical decision making, while Factor 3 (Empathy) predicted donation likelihood. With the negative relationship between *moral agency* and unethical behavior being well established (Hillbig & Ingo, 2015; de Vries & Van Gelder, 2015), it is unsurprising that *Factor 1 (Moral Agency)* would be a significant, negative predictor of unethical decision making. The association between increased rule following and PNS could partially explain the link between *Factor 6 (Moral Reductionism)* and ethical behavior (Blais et al., 2005). Because of the strict moral outlook associated with religiosity, it follows that *Factor 2 (Dogmatism)* was also a negative predictor of unethicality (Voert et al., 1994). An additional explanation for this association is that the binding foundations comprising this factor are associated with condemnation of self-control failure (Mooijman, Meindl, Oyserman, Monterosso, & Dehgani, 2018). *Dogmatism* also interacted with *Factor 5 (Lightness)* as a significant predictor of ethical decision making. Figure 2 shows this interaction, wherein those who highly endorse both dogmatism and lightness tend to be less likely to commit unethical behaviors. Here, it may be that those who do not believe in the inherent value of morals may act ethically in order to fit the prescriptions of their ingroup. However, the mechanism behind this interaction requires further investigation.

In the context of prosocial donation, *Factor 3 (Empathy)* was the only positive predictor. This result could be expected, as empathic concern is associated with other-focused feelings that motivate one to act prosocially (Dovidio, Schroeder & Allen, 1990). Furthermore, compassion is associated with a low desire to punish wrongdoers (Weng et al., 2015). In this vignette participants are told that the woman had a previous criminal record. However, for those high in *Factor 3 (Empathy)*, this information may not be relevant when deciding to donate or not. Endorsers of *Factor 2 (Dogmatism)*, on the other hand, may not be so forgiving, as it served as a negative predictor of prosocial behavior to the woman. While dogmatism promotes ethical behavior, it may inhibit prosociality towards outgroup members or those deemed unworthy. This result is congruent with Nilsson, Erlandsson, and Vastfjall (2016) who found that the binding moral foundations are predictive of lower donations toward charitable causes supporting an outgroup. Empathy and Dogmatism also interact with one another in such a way that low endorsement of Dogmatism and high endorsement of Empathy is predictive of prosocial donation. This interaction appears in Figure 3.

Factor 5 (Lightness) and *Factor 4 (Avoidant Emotionality)* did not significantly predict either behavior. However, these two factors were involved in significant interactions. As such, the two scenarios tested may not be directly relevant to the two behaviors measured, but tangentially interact.

In a broad sense, the results of this study support two claims. First, the findings demonstrate that the factors proposed by the moral mosaic are significant predictors of self-reported unethical and prosocial behavior. This evidences that the factors are relevant to the moral sphere and could possibly serve as a predictive tool for other moral behaviors. Second, the results show that these factors explain over twice the variance in both outcomes than traditional

measures such as openness, conscientiousness, extroversion, agreeableness, and emotionality. Although openness and extroversion were significant additions in Table 5, they added no more variance than interactions between the *moral mosaic* factors.

Study 1C

As study 1B demonstrates, the *moral mosaic* provides significant and unique predictors of moral behavior. However, relying on 22 scales and over 250 items is not a practical way to predict behavior. As such, the goal of Study 1C is to create robust, short-form of the *moral mosaic* that provides reliable and efficient measures of each factor.

Method 1C

This study consisted of three main steps. First, to create shortened versions of each factor, three items were selected from each of the 35 indicator variables used in Study 1A. The goal was to select three items from each variable that were most representative of the measure in terms of item-total correlation, without sacrificing the scale's breadth. To do this, item-total correlations on each measure were calculated. The item with the highest item-total correlation was selected for the short-form measure. The selected items were removed from their original scales and item-total correlations were run a second time. Once again, the items with the highest item-total correlation were selected and removed from their original scales. This process was repeated once more to obtain three items for each predictor indicator variable. This approach should ensure that items tapping into one specific facet of a measure would not dominate the short-form assessment. Second, short form factor scores were created by grouping the short-form items for each factor together. The items for each factor were standardized and then averaged. Cronbach's alphas were calculated for each short-form factor to ensure that they were

reliable measures. Finally, correlations between the short-form and long-form factors were calculated as a form of validation.

Results 1C

Creation of short-form factors. By selecting three items from each scale, a short-form of the *moral mosaic* was created that uses 105 items. The short-form measure for *Factor 1 (Moral Agency)* consists of 22 items and appears in Table 6, $\alpha = .811$. The short-form version of *Factor 2 (Dogmatism)* consists of 22 items and appears in Table 7, $\alpha = .829$. The short-form version of *Factor 3 (Empathy)* comprises 18 items and appears in Table 8, $\alpha = .835$. The short-form version of *Factor 4 (Avoidant Emotionality)* is made of 15 items and appears in Table 9, $\alpha = .796$. The short-form version of *Factor 5 (Lightness)* contains 11 items and appears in Table 11, $\alpha = .728$. The short-form version of *Factor 6 (Moral Reductionism)* contains 15 items and appears in Table 12, $\alpha = .637$.

Correlations with long-form factors. Second, comparisons between the factor scores of the short-form factors and their respective long-form measures were made. Table 13 displays the correlation matrix between the long-form factors and short form factors. Short-form and long-form versions of *Factor 1 (Moral Agency)* were strongly correlated with one another, r (N = 448) = .866, p = .000. Short-form *Factor 2 (Dogmatism)* was strongly correlated with its long-form counterpart, r (N = 448) = .914, p = .000. *Factor 3 (Empathy)* exhibited a strong correlation between both forms, r (N = 448) = .971, p = .000. Short form and long form versions of *Factor 4 (Avoidant Emotionality)* displayed a strong correlation with each other, r (N = 448) = .956, p = .000. *Factor 5 (Lightness)* showed a strong correlation between its long and short versions, r (N = 448) = .901, p = .000. *Factor 6 (Moral Reductionism)* displayed a highly significant, yet moderate correlation between its long and short form factors, r (N = 448) = .661, p = .000

Discussion 1C

This section established a short and practical way of measuring the six factors. The resulting short-forms allow all six factors to be measuring using 105 items, with the majority of these displaying good or adequate reliabilities. *Factor 6 (Moral Reductionism),* however, had a questionable reliability. This pattern is also displayed in the correlations between the short-form factors and the long-form factors, with the first five factors sharing Pearson's correlations at the .85 level or higher. The correlation of *Factor 6 (Moral Reductionism)* with its short form was lower, but still strong, r (N = 448) = .661, p = .000. One possible explanation as to why Factor 6 may be less reliable than the other factors could be that indicator measures for this factor tend to be derived from larger scales. As such, some aspects of the measures comprising this factor may be lost in creating the short-form version. Despite its lower reliability and correlation with the full-scale version, the short-form version of *Factor 6 (Moral Reductionism)* still shows reasonable reliability. Together, these short-form versions allow for a more practical way of measuring the factors without sacrificing much validity.

Study 1D

After establishing the short-form measures of the *moral mosaic* factor in Study 1C, the purpose of this study was to determine if the predictive power of the short-form factors were comparable to the long-form versions as predictors of unethical decision making and donation likelihood. Additionally, the predictive power of the short-form scales was compared to the Big Five traits of openness, conscientiousness, extroversion, agreeableness, and emotionality, as measured by the HEXACO (Lee & Ashton, 2004). This study utilized the method of Study 1B, substituting the short-form factors for the long-form versions.

Method 1D

This data came from the survey and participants described in Study 1A. The short-form factors established in Study 1C were used as predictor variables. Factor scores were calculated by standardizing and averaging the items contained in each short-form measure. Additionally, the openness, conscientiousness, extroversion, agreeableness, and emotionality facets of the HEXACO (Lee & Ashton, 2004) served as comparative predictors. The unethical decision-making questionnaire (Detert, Treviño & Sweitzer, 2008) and donation likelihood scenario (Bozeman, 2015) served as outcome variables.

Results 1D

Unethical Decision Making

Model 1. The six short-form factors together in step one explained 25.6% of the variance, R^2 = .256, $F(6, 442) = 25.366$, $p = .000$. Similar to Study 1B, *Short-form Factor 1 (Moral Agency)* was the largest, negative predictor of unethical behavior, $\beta = -.456$, $t(442) = 9.878$, $p = .000$. *Short Form Factor 2 (Dogmatism)* and *Short-form Factor 6 (Moral Reductionism)* also predicted unethical decision making similarly to their long-form counterparts, $\beta = -.095$, $t(442) = 2.116$, $p = .035$; $\beta = -.121$, $t(442) = 2.694$, $p = .007$. None of the other short-form factors was a significant predictor in this first step. The same interaction from the long-form version also entered into step 2 of this model, $\Delta R^2 = .013$, $F(1, 141) = 23.144$, $p = .006$. This interaction between *Short-Form Factor 2 (Dogmatism)* and *Short-form Factor 5 (Lightness)* had similar predictive power, $\beta = -.116$, $t(441) = 2.748$, $p = .006$. Table 14 displays this regression.

Model 2. As before, openness entered the equation as a significant predictor in the second step. It explained an additional 1.4% of the variance, $\Delta R^2 = .014$, $F(1, 440) = 23.303$, $p =$

.004. However, in this model, extroversion also entered the equation in a third step and explained an additional 0.8% of the variance, $\Delta R^2 = .008$, $F(1, 439) = 21.144$, $p = .031$. Table 15 shows the results of the regression

Model 3. Similar to the results of Study 1 B, *Short-form Factor 1 (Moral Agency)* entered the equation in the second step, $\Delta R^2 = .128$, $F(1, 441) = 22.464$, $p = .000$. *Factor 6 (Moral Reductionism)* entered the equation in a third step and explained an additional 3% of the variance, $\Delta R^2 = .030$, $F(1, 4440) = 22.546$, $p = .000$ and *Factor 2 (Dogmatism)* entered the equation in a fourth step, $\Delta R^2 = .016$, $F(1, 439) = 21.343$, $p = .002$. This model appears in Table 16.

Donation Scenario

Model 1. When the short-form factors were entered simultaneously in step 1, they explained 10.1% of the variance, $R^2 = .101$, $F(6, 442) = 8.235$, $p = .000$. As before, Factor 3 (Empathy) was the only positive predictor, $\beta = .270$, $t(442) = 5.359$, $p = .000$. However, Factor 2 (Dogmatism), was not a significant predictor, along with the other factors. Only one interaction entered the equation, $\Delta R^2 = .017$, $F(1,441) = 8.392$, $p = .004$. This second step contained the interaction between *Factor 1 (Moral Agency)* and *Factor 4 (Avoidant emotionality)*, $\beta = -.133$, $t(441) = 2.915$, $p = .004$. Table 14 displays this regression model.

Model 2. In this model, none of the HEXACO factors reached significance in the second step. As such, this model mirrors *Model 1*. It appears in Table 15.

Model 3. Congruent with the full-scale version, Empathy entered the equation in the second step and explained an additional 7.4% of the variance, $\Delta R^2 = .074$, $F(1, 441) = 8.482$, $p = .000$. Unlike the long-form model, *Short-form Factor 1 (Moral Agency)* also entered this

equation as a positive predictor of donation likelihood in step 3. It explained an additional 0.9% of the variance $\Delta R^2 = .009$, $F(1,440) = 8.005$, $p = .031$. Table 16 shows the results of this regression.

Discussion 1D

This section's goal was to compare the predictive power of the short-form factors with those obtained by the full-scale model. These two models were highly comparable in their predictive power of the two moral outcomes. As could be expected, the variance explained by the factors decreased slightly for the short-form model, but the predictive patterns remained largely unchanged. One notable exception is that the short-form version of *Factor 2 (Dogmatism)* was not a significant, negative predictor of donation likelihood. However, this factor was marginally significant in Study 1B.

Another interesting difference with the short-form model is that in Table 14, the short-form version of *Factor 1 (Moral Agency)* entered the equation in step 3. This could indicate that the short-form version of this model may be more streamlined in predicting prosocial action. It is also possible that the shortened versions of the scales allowed for less overlap, allowing it to enter the equation. Either way, it only explained less than an additional 1% of the variance.

The results of this section show that the short-form factors are useful and homologous to the long-form factors. The short-form of the *moral mosaic* can be used as an efficient and practical measures of the 6 factors that could allow for more expedient assessment of these latent constructs.

General Discussion

Collectively, the results obtained in this study provide initial evidence that *the moral mosaic* serves as a relevant and unique tool for predicting moral behavior. This factor structure explained more variance in unethical and prosocial outcomes than the commonly utilized Big Five traits. Additionally, the short-form version of the *moral mosaic* allows for expedient assessment of the factors without losing much predictive power or explained variance. Together, these findings suggest that the *moral mosaic* could be a useful addition to the moral psychology literature as a novel assessment tool.

Additional contributions to the literature emerge when looking at specific predictive patterns of the factors. Across the two contexts of unethical decision making and prosocial behavior, no factor was a consistent predictor of moral behavior. This result supports the hypothesis that contextual differences matter in determining whether a personal characteristic is a moral predictor. As such, this study furthers the notion that psychological studies should be highly specific in the moral outcomes they measure.

Moral Mosaic Factor Structure

By utilizing a maximum likelihood extraction with a promax rotation, six underlying, latent factors emerged. Based on their indicator variables (Table 2), appropriate labels are *moral agency*, *dogmatism*, *empathy*, *avoidant emotionality*, *lightness*, and *moral reductionism*, respectively. Herein, these six factors represent unique facets of moral characteristics.

In many ways, *Factor 1 (Moral Agency)* represents a conventional view of ethicality, as it contains low endorsement of overtly antisocial attributes and positive loadings of characteristics that represent taking ownership for one's actions. *Factor 2 (Dogmatism)* represents a morality

built upon conservative values. As such, an individual who highly endorses this factor would be likely to look to the values of their ingroup as the standard for what is right or wrong. *Factor 3 (Empathy)* represents an other-oriented value system. Herein, those high in this trait focus less on their selves and are moved to commit moral deeds out of concern for others. *Factor 4 (Avoidant Emotionality)* indicates a tendency to become overwhelmed at distressing stimuli. As such, individuals who endorse this trait may avoid difficult situations that could lead to undesired emotions. *Factor 5 (Lightness)* represents a predisposition of not taking oneself seriously. Individuals high on this trait tend to care little about their motives or how they are perceived, as they believe values and principles hold no value. *Factor 6 (Moral Reductionism)* represents the desire to simplify stimuli into easily interpretable segments. This desire extends to the self, as such individuals like to think of themselves in simple, often positive terms.

Moral Mosaic Factors as Predictors

Using these factors as predictors for two separate forms of moral behavior reveals two major findings. First, these factors explain more variance in the measured moral behavior than traditional measures of openness, conscientiousness, extroversion, agreeableness, and emotionality. Second, analyses show that these factors not only differ in their predictive power across scenarios, but that some may even become antisocial predictors in varying situations.

When looking at unethical behavior, the six factors comprising the *moral mosaic* accounted for over twice the variance explained by openness, conscientiousness, extroversion, agreeableness, and emotionality. *Factor 1 (Moral Agency)*, *Factor 2 (Dogmatism)*, and *Factor 6 (Moral Reductionism)* were negative predictors of unethical behavior. While it is not surprising that these factors predict ethical behavior, their reasons for promoting this behavior may be

vastly different. As such, *Factor 1 (Moral Agency)* may promote ethical decision making out of a strong aversion to feeling guilty, while *Factor 6 (Moral Reductionism)* may promote it through following prescribed behaviors, and *Factor 2 (Dogmatism)* through communal moral values.

Additionally, these factors explained more than three times the variance as openness, conscientiousness, extroversion, agreeableness, and emotionality in donation likelihood, but they did so in a different pattern. Here, *Factor 3 (Empathy)* was a positive predictor of willingness to donate to a homeless woman, while *Factor 2 (Dogmatism)* was a negative predictor. This result shows that different circumstances can influence which moral qualities motivate one to moral action, or the lack thereof. Interestingly, whereas *Factor 2 (Dogmatism)* may motivate individuals to make ethical decisions, it may also nudge them away from donating money to someone whom they see as undeserving. One possible reason for this shift in behavior could be that homeless individuals may be viewed as acting outside the authority and purity moral foundations, as they do not fit into the typical societal hierarchy and are often viewed as unkempt. This clearly marks them as an outgroup member. Preston and Ritter (2013) found that priming participants with the term "religion" promoted ingroup-serving behaviors but not outgroup ones. Conversely, they found that primes of "God" led to increased prosociality towards outsiders. One explanation offered is that "religion" makes individuals think communally, while "God" makes individuals think more independently about their behavior. Because *Factor 3 (Dogmatism)* consists of mainly binding moral foundations, it would follow that these individuals' values are more group-minded in their moral behavior.

Limitations

While the results of this study appear robust, some errors occurred during the study that are worth noting. Most of these are centered on the scales utilized for analysis. For instance, the heavy-light measure underwent small changes to auxiliary words in the definitions of light for the second and third waves. This is noted in Appendix A. Additionally, one item was accidentally removed from the shame-withdrawal facet of the GASP scale. This item was "Your home is very messy and unexpected guests knock on your door and invite themselves in. What is the likelihood that you would avoid the guests until they leave?" As such, the shame-withdrawal facet was assessed using three items instead of four. This may have slightly decreased the reliability of the measure. Similarly, one item from the five-facet mindfulness questionnaire was not included in the survey. This item was "Generally, I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing."

Additionally, results for the unethical decision-making questionnaire differed significantly across waves, $F(2, 446) = 4.746$, $p = .009$. Herein, unethical decisions for participants in wave 2 (M= 4.269, SD = .988) were significantly higher than they were for participants in wave 1 (M = 3.876, SD = .1.01) and wave 3 (M = 3.922, SD = 1.189). Although it is possible that this difference could be due to changes in order of measures, this result could also be due to sample differences across semesters. Additionally, wave 2 had a smaller sample than waves 1 or 3.

Future Directions

The *moral mosaic* serves as a preliminary foray into the various underlying mechanisms behind a host of moral attributes. From the foundation laid by this study, there are several different directions which can be explored. Three general areas that can be improved upon are the inclusion of more personal characteristics, the testing of more behavioral outcomes, and the inclusion of more diverse samples.

Additional Personal Characteristics

Whereas this study utilized 35 unique characteristics for factor analysis, this number only scratches the surface of the moral attributes defined in psychological research. Herein, there is much room to explore. Some factors, such as *Factor 1 (Moral Agency)* and *Factor 2 (Dogmatism)* are made up of a large number of attributes, whereas others, such as *Factor 5 (Lightness)* are made up of relatively few attributes. One beneficial next step would be to flesh out the established factors by including more attributes into the factor analysis. In doing so, a greater picture of some smaller factors could be utilized. For instance, philosophical outlooks (such as moral nihilism) may load with *Factor 5 (Lightness)* and self-structures (such as need for closure) might load onto *Factor 6 (Moral Reductionism).*

Additionally, the two-item heavy-light measure used here had low internal reliability. A 10-item form of this measure isolates each component of the heavy-light definitions as an individual item. This multiple-item measure is being validated in ongoing studies (Bell & Showers, 2019b). This format permits participants to endorse or decline aspects of each approach and will allow researchers to compare the reliability of the multiple-item and two-item formats. The multiple-item version of the Heavy-Light Scale appears in Appendix D.

Moral Outcomes

One shortcoming of this study is the limited size and scope of moral outcomes measured. Due to these constraints, only two self-reported behaviors were assessed. Although these measures yielded interesting results, they could not assess moral behavior to the depth that it deserves. The six factors comprising the *moral mosaic* should indeed have unique qualities that would motivate an individual to act morally in some contexts and inhibit them in others. However, by focusing on unethical decision-making and donation likelihood, the predictive power of all the factors likely was not revealed, as these two behaviors were largely explained *by Factor 1 (Moral Agency)* and *Factor 3 (Empathy)*, respectively.

In order to remedy this problem, a more elaborate taxonomy of moral behavior needs to be established that identifies behaviors that are sensitive to the remaining 4 factors. For instance, *Factor 2 (Dogmatism)* may be highly predictive of showing kindness to an individual with whom one shares similarity, but not to an individual who is of an opposing belief system. As such, studies that target ingroup and outgroup morality would be worth investigating.

Factor 4 (Avoidant Emotionality) may influence one to act in an antisocial manner in many contexts. For instance, this factor could be associated with escaping distressing situations instead of helping. Additionally, this factor could influence individuals to act antisocially if they were experiencing negative emotion, as they may have problem regulating their feelings and finding creative ways to deal with them.

Factor 6 (Moral Reductionism) could be associated with prosocial and ethical action when it is clear cut and the social norm. However, self-deceiving individuals may not have the resources to act prosocially when the situation is unclear, or the behavior is frowned upon. This

trait may also allow individuals to ignore or downplay their antisocial behavior, as acknowledging it would complicate their self-image.

Factor 5 (Lightness) could predict a lack of regard for the consequences of one's actions. One may see morality as an external tool to get what one wants, without feeling beholden to moral standards when they are no longer useful. As such, this factor could predict cheating for personal gain or even Machiavellian behavior (Jones & Paulhus, 2017).

Sample Diversity

It is worth noting that a disproportionate majority of the participants in this study were female. Possible sex differences may influence the factor structure of the *moral mosaic*. For instance, females tend to be more relational, empathic, and emotional than males (Eisenberg et al., 1994). However, with the current sample size, there are not enough participants to compare differences between the sexes in the factor structure. A valuable future study could draw on a larger population to investigate these differences, if any.

Additionally, this study was performed at a university in a largely conservative area of the United States. It is possible that conservative ideology may also alter the factor structure of the *moral mosaic*. Whereas the moral foundations of purity, authority, and loyalty are highly endorsed by conservatives, they are not generally endorsed by liberals. Herein, *Factor 2 (Dogmatism)* may be constructed differently in largely liberal areas, as liberals would not view these values as overtly moral. This could lead to some indicator variables from that factor (such as moral identity and presence of life meaning) to change factors. A valuable future study could repeat this procedure with an overtly liberal or diverse sample to see if any differences appear.

Conclusion

To summarize, these data demonstrate that a factor-based approach to predicting moral behavior has great merit. The *moral mosaic* provides a more holistic approach to predicting moral behavior than single measure approaches, by grouping associated traits together. Through this broader lens, attributes are not viewed in a prosocial or antisocial dichotomy, but as nuanced characteristics with variable strengths and weaknesses. Herein, factors that were negative predictors of unethical decision-making did not positively predict prosocial donation. *Factor 2 (Dogmatism)*, even flipped as a moral predictor in the context of ethicality, but as an antisocial predictor in the prosocial donation scenario.

Although the results of this study are intriguing, they are just the first step in creating a more detailed moral taxonomy. A host of personality traits and moral outcomes are worth investigating and incorporating into this model. In doing so, a more objective view of moral motivations can be realized. The definition of morality is constantly changing, adapting, and evolving. As such, methods of studying morality need to do likewise.

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Appendix A

Heavy-Light Scale

Generally speaking, is your approach to life HEAVY or LIGHT? Please read the definitions below and then indicate your answers.

People who take a HEAVY approach take life seriously. They hold important values and principles and believe it is important to live up to them. They believe that life can have meaning and purpose and that an individual's values and principles matter.

People who take a LIGHT approach view life as a game. They believe that values or principles may need to be compromised to meet everyday goals, and that life is often too uncontrollable for it to have meaning or purpose. Because of this, an individual's values and principles don't always matter.

1. Compared to the average person, would you say your approach to life is HEAVY or LIGHT? (choose one)
   - My approach to life is LIGHT compared to the average person
   - My approach to life is HEAVY compared to the average person

2. Now, without comparing yourself to others, to what extent is your approach to life HEAVY or LIGHT?

1 2 3 4 5 6 7

(almost always HEAVY) (neither HEAVY nor LIGHT) (almost always LIGHT)

Note. An early iteration of the measure taken by participants in wave 1 defined lightness as the following:

People who take a LIGHT approach view life as a game. They believe that values or principles **may** need to be compromised to meet everyday goals, and that life is **often** too uncontrollable for it to have meaning or purpose. Because of this, an individual's values and principles **don't always** matter.

Appendix B

Unethical Decision-Making Questionnaire (Detert, Treviño & Sweitzer, 2008)

How likely is it that you would do the behavior described?

1 2 3 4 5 6 7

(not at all likely) (about 50% likely) (highly likely)

1. You work in a fast-food restaurant in downtown Norman. It's against policy to eat food without paying for it. You came straight from classes and are therefore hungry. Your supervisor isn't around, so you make something for yourself and eat it without paying.

2. You work as an office assistant for a department at the University of Oklahoma. You're alone in the office making copies and realize you're out of copy paper at home. You therefore slip a ream of paper into your backpack.

3. You're preparing for the final exam in a class where the professor uses the same exam in both sections. Some of your friends somehow get a copy of the exam after the first section. They are now trying to memorize the right answers. You don't look at the exam, but just ask them what topics you should focus your studying on.

4. You've waited in line for 10 minutes to buy a coffee and muffin at Starbucks. When you're a couple of blocks away, you realize that the clerk gave you change for $20 rather than for the $10 you gave him. You savor your coffee, muffin and free $10.

5. You get the final exam back from your professor and you notice that he's marked correct three answers that you got wrong. Revealing his error would mean the difference between an A and a B. You say nothing.

6. Your accounting course requires you to purchase a software package that sells for $50. Your friend, who is also in the class, has already bought the software and offers to lend it to you. You take it and load it onto your computer.

7. Your boss at your summer job asks you to get confidential information about a competitor's product. You therefore pose as a student doing a research project on the competitor's company and ask for the information.

8. You are assigned a team project in one of your courses. Your team waits until the last minute to begin working. Several team members suggest using an old project out of their fraternity/sorority files. You go along with this plan.

Note. Results for wave 2 differed significantly from waves 1 and 3, $F(2, 446) = 4.746$, $p = .009$.
wave 1 (M = 3.876, SD = .1.01); wave 2 (M= 4.269, SD = .988); wave 3 (M = 3.922, SD = 1.189).

Appendix C

Donation Likelihood (Bozeman, 2015)

A homeless woman and her two children are sitting outside of a local convenience store with a sign asking for donations. Times have been hard for the woman and her children, and you know she relies on the donations she receives from others in order to provide for her children. You also happen to know she has a past criminal record.

How likely would you be to donate money to this woman?

1	2	3	4	5	6	7
(extremely unlikely)			(neither likely nor unlikely)			(extremely likely)

Note. A follow up question not analyzed for this study stated:

Imagine you have a pocket full of dollar bills and coins totaling about $5. How much money would you be willing to donate to this woman?

This item was not utilized because the open response nature allowed participants to answer “I would give her food”.
Responses to the Donation Likelihood item did not differ significantly across waves, $F(2, 446) = .007$, $p = .993$.
wave 1 (M = 4.740, SD = 1.641); wave 2 (M= 4.740, SD = 1.350); wave 3 (M = 4.760, SD = 1.690).

Appendix D

Revised Heavy-Light Scale for Future Studies

1	2	3	4	5
(completely disagree)		(neither agree nor disagree)		(completely agree)

1. It is important that my relationships with others are sincere.
2. Life seems too uncontrollable to have purpose or meaning.
3. I believe that my morals and principles matter, and I strive to live up to them.
4. I believe that life can have purpose and meaning.
5. All in all, the world is indifferent to the moral choices we make.
6. My general approach to life is a serious one, with important values and principles
7. People who act according to their principles can make a difference in the world.
8. I see life as a game, in which morals and principles don't always matter.
9. Most human relationships involve some kind of ulterior motive.
10. A person's morals and principles often have to be compromised to meet everyday goals.

Table 1.
Placement of Measures for Each Wave of Data Collection

I	II	III
n=240	n=92	n=117
Personal Need For Structure	Personal Need For Structure	Personal Need For Structure
Self-Consciousness Scale	Self-Consciousness Scale	Self-Consciousness Scale
Brief Self-Control	Brief Self-Control	Brief Self-Control
Five Facet Mindfulness Questionnaire (Short version)	Five Facet Mindfulness Questionnaire (Short version)	Five Facet Mindfulness Questionnaire (Short version)
Donna Scenario*	Donna Scenario-Control	Unethical Decision Making
Unethical Decision Making	Unethical Decision Making	Donation Scenario
Donation Scenario	Donation Scenario	Stereo Scenario
Stereo Scenario	Stereo Scenario	Free Will and Determinism Plus
Brief Mood Introspection Scale	Free Will and Determinism Plus	Moral Disengagement
Free Will and Determinism Plus	Moral Disengagement	Specific Intellectual Humility (Human Nature)
Moral Disengagement	Specific Intellectual Humility (Human Nature)	Need for Cognition
Specific Intellectual Humility (Topic of Choice)	Need for Cognition	Meaning in Life
Specific Intellectual Humility (Human Nature)	Meaning in Life	Threat Orientation Scale
Need for Cognition	Threat Orientation Scale	Balanced Inventory of Desired Reporting
Meaning in Life	Balanced Inventory of Desired Reporting	Heavy Light Measure
Threat Orientation Scale	Heavy Light Measure	Interpersonal reactivity Inventory
Balanced Inventory of Desired Reporting	Interpersonal reactivity Inventory	Guilt and Shame Proneness
Heavy Light Measure	Guilt and Shame Proneness	Narcissistic Personality Inventory (Short Version)
Interpersonal reactivity Inventory	Narcissistic Personality Inventory (Short Version)	HEXACO
Guilt and Shame Proneness	HEXACO	Donna Scenario- Open Prompt
Narcissistic Personality Inventory (Short Version)	Demographics	Demographics
HEXACO		
Demographics		

Note. Donna Scenario had participants read the story about a woman whose careless action created a fatal fire. Participants were either assigned to argue why she was responsible, why she was not responsible, a combination of both, or write an essay about if she was responsible.

Table 2.

Measures and Factor Loadings of Six Factor Model

Measures	Scale	Factor Loadings					
		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Narcissism	Narcissism Personality Inventory- short version (Gentile et al., 2013)	**-.739**	.114	-.001	-.231	-.099	.052
Honesty/ Humility	HEXACO Personality Inventory (Ashton & Lee, 2004)	**.699**	.145	.008	-.011	.095	.060
Negative Behavior Evaluation	Guilt and Shame Proneness (Cohen Wolf, Panter, & Insko, 2011)	**.553**	.170	.167	.221	-.057	.133
Moral Disengagement	Moral Disengagement (Detert, Treviño, & Sweitzer, 2008)	**-.539**	.007	-.016	.130	.185	-.060
Dichotomous Belief	Dichotomous Thinking Inventory (Oshio, 2009)	**-.392**	.294	-.273	.194	.044	.269
Scientific Determinism	Free Will and Determinism Plus (Paulus & Carey, 2011)	**-.332**	-.083	.103	.129	.050	.156
Self-Control	Brief Self-Control (Tangney, Baumeister & Boone, 2004)	**.311**	.187	-.068	-.272	.079	.306
Fairness	Moral Judgment Scale (Graham, Haidt, & Nosek, 2009)	**.272**	-.198	.248	.152	.093	.137
Religious Influence	Religiousness Measure (Sethi & Seligman, 1993)	.118	**.728**	.135	.074	.038	-.119
Purity	Moral Judgment Scale (Graham, Haidt, & Nosek, 2009)	.065	**.660**	.125	.243	.072	-.003
Authority	Moral Judgment Scale (Graham, Haidt, & Nosek, 2009)	-.124	**.582**	.065	.162	-.010	.030
Present Meaning in Life	Meaning in Life (Steger, Frazier, Oishi, & Schlehofer, 2006)	-.051	**.558**	.096	-.303	.067	.130
Intellectual Humility- Human Nature	Specific Intellectual Humility (Hoyle et al., 2016)	.082	**-.375**	.178	.047	.005	.128
Moral Identity	Moral Identity (Aquino & Reed, 2002)	.003	**.351**	.347	.108	-.101	.004
Loyalty	Moral Judgment Scale (Graham, Haidt, & Nosek, 2009)	.088	**.299**	-.017	-.044	-.035	.089
Compassion	Dispositional Positive Emotion Scale (Shiota & Keltner, 2006)	.049	.257	**.800**	-.017	.007	-.158
Awe	Dispositional Positive Emotion Scale (Shiota & Keltner, 2006)	-.302	.181	**.706**	-.237	.154	.030
Harm	Moral Judgment Scale (Graham, Haidt, & Nosek, 2009)	.161	.084	**.530**	.229	.004	-.068
Empathic Concern	Interpersonal Reactivity Inventory (Ingolia, Coco, & Albiero, 2016)	.317	.039	**.516**	.042	-.115	-.056
Perspective Taking	Interpersonal Reactivity Inventory (Ingolia, Coco, & Albiero, 2016)	.021	-.078	**.511**	-.126	-.005	.072
Search for meaning in Life	Meaning in Life (Steger, Frazier, Oishi, & Schlehofer, 2006)	-.212	-.326	**.327**	.106	-.194	.053

Personal Distress	Interpersonal Reactivity Inventory (Ingolia, Coco, & Albiero, 2016)	.163	-.021	-.003	**.650**	-.051	.026
Need For Cognition	Need for Cognition (Cacioppo & Petty, 1982)	-.111	-.222	.238	**-.530**	-.017	.136
Shame/ Withdrawal	Guilt and Shame Proneness (Cohen Wolf, Panter, & Insko, 2011)	-.048	.071	.047	**.516**	.094	-.051
Mindfulness	Five Facet Mindfulness- Short version (Bohlmeijer et al., 2006)	-.065	.038	.034	**-.515**	.212	.250
Avoidant Denial	Threat Orientation Scale (Thompson & Schlehofer, 2008),	-.134	.201	.057	**.450**	.126	-.056
Self-consciousness Public	Self-Consciousness Scale (Fenigstein, Scheier, Buss, 1975)	.207	.094	-.103	-.217	**-.545**	-.002
Light	Heavy/ Light Measure	.104	.228	-.086	-.341	**.538**	-.020
Optimistic Denial	Threat Orientation Scale (Thompson & Schlehofer, 2008),	.121	-.197	-.125	.142	**.511**	-.067
Self-consciousness Private	Self-Consciousness Scale (Fenigstein, Scheier, Buss, 1975)	.264	.115	-.321	.164	**-.477**	-.008
Heavy	Heavy/ Light Measure	-.193	-.223	.028	.161	**-.459**	.026
Self-deceptive Enhancement	Balanced Inventory of Desirable Responding (Paulhus, 1994)	-.143	-.177	.024	-.352	-.048	**.625**
Impression Management	Balanced Inventory of Desirable Responding (Paulhus, 1994)	.481	-.125	.031	-.011	-.044	**.567**
Free Will	Free Will and Determinism Plus (Paulus & Carey, 2011)	.045	.079	-.082	-.086	-.025	**.478**
Personal Need For Structure	Personal Need for Structure (Thompson, Naccarato, & Parker, 1992)	-.079	.088	-.202	.242	.387	**.392**
Preference for Dichotomy	Dichotomous Thinking Inventory (Oshio, 2009)	-.224	.249	.083	.241	.067	**.349**

Factor	Rotation sums of squared loadings	Explained Variance (%)
F1	3.602	12.911
F2	2.928	8.578
F3	3.356	7.775
F4	2.872	4.854
F5	2.527	2.650
F6	2.505	2.719

Note. N=449 Boldface values indicate primary factor loadings

Table 3.
Goodness of Fit Tests Comparing Number of Factors for EFA Model

EFA Model	χ^2	df	RMSEA	RMSEA 90% CI
5-factor	1135.535***	460	.057	.053-.061
6-factor	913.753***	429	.050	.045-.054
7-factor	794.918***	399	.047	.0422-.052

Note. *$p < .05$ **$p < .01$ ***$p < .001$ N= 449 df= degrees of freedom. RMSEA= root mean square error approximation.

RMSEA 90% CI= root mean square error approximation 90% confidence interval.

Table 4.

Long-form Factor Scores: Regressions Predicting Unethical Behavior or Prosocial Donation

Unethical Decision Making				Donation Scenario			
	Cumulative R^2	ΔR^2	β		Cumulative R^2	ΔR^2	β
Step 1	.273***	.273***		Step 1	.108***	.108***	
F1: Moral Agency			-.497***	F1: Moral Agency			.026
F2: Dogmatism			-.105**	F2: Dogmatism			-.091*
F3: Empathy			.067	F3: Empathy			.302***
F4: Avoidant Emotionality			.017	F4: Avoidant Emotionality			-.007
F5: Lightness			-.065	F5: Lightness			-.049
F6: Moral Reductionism			-.110*	F6: Moral Reductionism			-.033
Step 2	.286***	.013**		Step 2	.120***	.012*	
F2: Dogmatism X F5: Lightness			-.116**	F2: Dogmatism X F3: Empathy			-.110*
				Step 3	.129***	.009*	
				F1: Honesty X F4: Avoidant Emotionality			-.097*
				Step 4	.137***	.009*	
				F5: Lightness X F6: Moral Reductionism			-.096*

*$p < .05$ **$p < .01$ ***$p < 001$

Note. N=449. All factors were entered in step 1 and each significant interaction was entered in subsequent steps with a criterion of $p \leq .05$.

Table 5.

Regressions Predicting Unethical Decisions or Prosocial Donation: Long-form Factors with Significant Big Five Traits Entered

	Unethical Decision Making				Donation Scenario		
	Cumulative R^2	ΔR^2	β		Cumulative R^2	ΔR^2	β
Step 1	.273***	.273***		Step 1	.108***	.108***	
F1: Moral Agency			-.497***	F1: Moral Agency			.025
F2: Dogmatism			-.106**	F2: Dogmatism			-.091*
F3: Empathy			.067	F3: Empathy			.302***
F4: Avoidant Emotionality			.017	F4: Avoidant Emotionality			-.007
F5: Lightness			-.066	F5: Lightness			-.050
F6: Moral Reductionism			-.109*	F6: Moral Reductionism			-.032
Step 2	.281***	.008*		Step 2	.118***	.010*	
Openness			-.106*	Extroversion			-.119*
Step 3	.295***	.014**		Step 3	.128***	.010*	
F2: Dogmatism X F5: Lightness			-.123**	F2: Dogmatism X F3: Empathy			-.103*
				Step 4	.137***	.009*	
				F1: Moral Agency X F4: Avoidant Emotionality			-.095*
				Step 5	.145***	.008*	
				F5: Lightness X F6: Moral Reductionism			-.092*

*$p < .05$ **$p < .01$ ***$p < .001$

Note. N=449 All factors were entered in Step 1. Each significant Big Five trait, as measured by the HEXACO (Lee & Ashton, 2004) was entered in subsequent steps, and each significant interaction between the 6 factors was entered as a final step. All additions had a criterion of $p \leq .05$.

Table 6.

Regressions Predicting Unethical Decisions or Prosocial Donation: Big Five Traits with Significant Long-form Factors Entered

Unethical Decision Making				Donation Scenario			
	Cumulative R^2	ΔR^2	β		Cumulative R^2	ΔR^2	β
Step 1	.106***	.106***		Step 1	.029*	.029*	
Openness			-.066	Openness			.133**
Conscientiousness			-.201***	Conscientiousness			-.028
Extroversion			.136**	Extroversion			-.058*
Agreeableness			-.208***	Agreeableness			.012
Emotionality			-.024	Emotionality			.086
Step 2	.252***	.146***		Step 2	.118***	.089***	
F1: Moral Agency			-.498***	F3: Empathy			.353***
Step 3	.273***	.021***					
F2: Dogmatism			-.161***				
Step 4	.283***	.011*					
F6: Moral Reductionism			-.118*				

*$p < .05$ **$p < .01$ ***$p < .001$

Note. N=449 Big Five traits, as measured by the HEXACO (Lee & Ashton, 2004) were entered in Step 1, and each significant Moral Mosaic Factor was entered in subsequent steps with a criterion of $p \leq .05$.

Table 7.

Selected Items Used to Create Short-form Factor 1: Moral Agency (S1: Moral Agency)

Cronbach's Alpha		.811
Measure	Items	Item-Total Correlation
Narcissism	I like having authority over other people (R)	.293
	I have a strong will to power (R)	.318
	I am apt to show off if I get the chance (R)	.361
Honesty/ Humility	I'd be tempted to use counterfeit money, if I were sure I could get away with it (R)	.496
	If I knew that I would never get caught, I would be willing to steal a million dollars (R)	.504
	I would get a lot of pleasure from owning expensive luxury goods (R)	.318
Moral Disengagment	Teasing someone does not really hurt them (R)	.433
	People who are mistreated have usually done things to deserve it (R)	.475
	Looking at a friend's homework without permission is just "borrowing it" (R)	.592
GASP-Negative Behavior Evaluation	You lie to people but they never find out about it, what is the likelihood you would feel terrible about the lies you told	.424
	You secretly commit a felony. What is the likelihood you would feel remorse for breaking the law	.472
	At a coworker's housewarming party, you spill red wine on their new cream colored carpet. You cover the stain with a chair so ; that nobody notices your mess. What is the likelihood you would feel that the way you acted was pathetic?	.449
DTI- Belief in Dichotomy	I think all people can be divided into "winners" and "losers" (R)	.457
	People can clearly be distinguished as being "good" or "bad" (R)	.267
	There are only "winners" and "losers" in this world. (R)	.437
FAD+-Scientific Determinism	Childhood environment will determine your success as an adult (R)	.150
	Your genes determine your future (R)	.303
	Science has shown how much your past environment created your current intelligence and personality (R)	.093
Brief Self-Control	Pleasure and fun sometimes keep me from getting work done (R)	.232
	I do certain things that are bad for me, if they are fun (R)	.366
	Sometimes, I can't stop myself from doing something, even if I know it is wrong (R)	.383
Moral Judgment-Fairness	If a friend wanted to cut in with me on a long line, I would feel uncomfortable because it wouldn't be fair to those behind me	.202
	When the government makes laws, the number one principle should be ensuring that everyone is treated fairly	.200

Note. *N*=437. (R) indicates that a value was reverse scored.
GASP = Guilt and Shame Proneness. DTI= Dichotomous Thinking Inventory. FAD+= Free Will and Determinism Plus.
Cases with missing values were excluded listwise. Citations for the scales appear in Table 2.

Table 8.

Selected Items Used to Create Short-form Factor 2: Dogmatism (S2: Dogmatism)

Cronbach's Alpha		.830
Measure	Items	Item-Total Correlation
Religious Influence	How much influence do your religious beliefs have on the important decisions of your life	.652
	How important would you say religion is in your life	.646
	Would you marry someone of another religion?	.515
Moral Judgment- Purity	People should not do things that are revolting to others, even if no one is harmed	.432
	I would call some acts wrong on the grounds that they are unnatural or disgusting	.481
	Chastity is still an important virtue for teenagers today, even if many don't think it is	.571
Moral Judgment- Authority	If I were a soldier and I disagreed with my commanding officer, I would obey anyway because that is my duty	.317
	Respect for authority is something all children need to learn	.466
	When the government makes laws, those laws should always respect the traditions and heritage of the country	.563
Meaning in Life- Present Meaning in Life	My life has a clear sense of purpose	.520
	I have a good sense of what makes my life meaningful	.437
	I have discovered a satisfying life purpose	.440
Self-importance of Moral Identity	The types of things I do in my spare time (e.g., hobbies) clearly identify me as having these characteristics.	.284
	Having these characteristics is not really important to me (R)	.094
	I often wear clothes that identify me as having these characteristics.	.253
Specific Intellectual Humility- Human Nature	My views about human nature today may someday turn out to be wrong (R)	.367
	It is quite likely that there are gaps in my understanding about human nature (R).	.248
	My views about human nature may change with additional evidence or information (R)	.321
Moral Judgment- Loyalty	If I knew my brother committed a murder, and the police were looking for him, I would turn him in (R)	.183
	When it comes to close friendships and romantic relationships, it is okay for people to seek out only members of their own ethnic or religious group.	.284

Note. *N*=435. (R) indicates that a value was reverse scored cases with missing values were excluded listwise. Citations for the scales appear in Table 2.

Table 9.

Selected Items Used to Create Short-form Factor 3: Empathy (S3: Empathy)

Cronbach's Alpha		.835
Measures	Items	Item-Total Correlation
DPES-Compassion	When I see someone hurt or in need, I feel a powerful urge to take care of them	.593
	Taking care of others gives me a warm feeling inside	..559
	I am a very compassionate Person	.562
DPES- Awe	I feel wonder almost every day	.326
	I see beauty all around me	.477
	I have many opportunities to see the beauty of nature	.330
IRI-Empathic Concern	I often have tender concerned feelings for people less fortunate than me	.525
	When I see someone being treated unfairly, I feel very much Pity for them	.411
	I would describe myself as a pretty soft-hearted person	.489
Moral Judgment- Harm	If I saw a mother slapping her child, I would be outraged	.275
	Compassion for those who are suffering is the most crucial virtue	.533
	The government must first and foremost protect all people from harm	.342
IRI- Perspective Taking	Before Criticizing someone, I try to imagine how I would feel if I were in their place	.404
	I sometimes try to understand my friends better by imagining how things look from their perspective	.473
	When I am upset at someone, I try to "put myself in their shoes" for a while.	.315
Meaning In Life- Search for Meaning	I am seeking a purpose or mission for my life	.373
	I am always looking to find my life's purpose	.376
	I am always searching for something that makes my life feel significant	.331

Note. *N*=445. (R) indicates that a value was reverse scored.
DPES= Dispositional Positive Emotions Scale. IRI= Interpersonal Reactivity Index.
Cases with missing values were excluded listwise. Citations for the scales appear in Table 2.

Table 10.

Selected Items Used to Create Short-form Factor 4: Avoidant Emotionality (S4: Avoidant Emotionality)

Cronbach's Alpha		.796
Measure	Items	Item-Total Correlation
IRI- Personal Distress	I tend to lose control during emergency situations	.504
	In emergency situations, I feel apprehensive and ill-at-ease	.337
	Being in a tense emergency situation scares me	.420
Need For Cognition	I would rather do something that requires little thought than something that is sure to challenge my thinking abilities	.466
	I really enjoy a task that involves coming up with new solutions to problems (R)	.298
	Thinking is not my idea of fun	.387
FFMQ-Mindfulness	It seems I am running on automatic without much awareness of what I am doing	.391
	When I feel something in my body, it's hard for me to find the right words to describe it	.317
	I tell myself I shouldn't be thinking the way I'm thinking	.308
GASP- Shame/ Withdrawal	After making a big mistake on an important project at work in which people are depending on you, your boss criticizes you in front of your coworkers. What is the likelihood that you would feign sickness and leave work	.434
	A friend tells you that you boast a great deal. What is the likelihood that you would stop spending time with that friend?	.446
	You take office supplies for personal use and are caught by your boss. What is the likelihood that you would quit your job?	.360
TOS-Avoidant Denial	Hearing information about threats makes me more stressed, so I avoid it	.501
	I would rather not hear about health or safety risks that may affect me	.441
	I tend to avoid information that I may be at risk for health problems	.426

Note. *N*=445. (R) indicates that a value was reverse scored.
IRI= Interpersonal Reactivity Index. FFMQ= Five Facet Mindfulness Questionnaire. GASP= Guilt and Shame Proneness.
TOS= Threat Orientation Scale.
Cases with missing values were excluded listwise. Citations for the scales appear in Table 2.

Table 11.

Selected Items Used to Create Short-form Factor 5: Lightness (S5: Lightness)

Cronbach's Alpha		.728
Measure	Items	Item-Total Correlation
Heavy/ Light	Now, without comparing yourself to others, to what extent is your approach to life HEAVY or LIGHT	.234
	Compared to the average person, would you say your approach to life is HEAVY or LIGHT? (R)	.275
Public Self-Consciousness	I'm concerned about the way I present myself	.452
	I'm concerned about what other people think of me	.518
	I'm self-conscious about the way I look	.445
TOS- Optimistic Denial	There is no point in worrying about possible threats when they might not even happen to me	.401
	I rarely think about bad things happening to me	.410
	If something bad happens to me, I will address it then, but it is not worthwhile to worry about what could happen	.389
Private Self-Consciousness	I reflect about myself a lot	.353
	I'm alert to changes in my mood	.262
	I'm constantly examining my motives	.368

Note. *N*=448. (R) indicates that a value was reverse scored.
TOS= Threat Orientation Scale.
Cases with missing values were excluded listwise. Citations for the scales appear in Table 2.

Table 12.

Selected Items Used to Create Short-form Factor 6 (Moral Reductionism)

Cronbach's Alpha		.637
Measures	Items	Item-Total Correlation
BIDR-Impression Management	There have been occasions when I have taken advantage of someone. (R)	.257
	I sometimes tell lies if I have to. (R)	.239
	I don't gossip about someone's business	.147
	I am very confident of my judgments	.203
BIDR-Self-deceptive Enhancement	I have not always been honest with myself. (R)	.130
	I sometimes lose out on things because I can't make up my mind soon enough.(R)	.031
FAD+ -Free Will	Criminals are totally responsible for the bad things they do	.408
	People have complete control over the decisions they make	.288
	People must take full responsibility for any bad choices they make	.266
Personal Need For Structure	I enjoy having a clear and structured mode of life.	.383
	I don't like situations that are uncertain.	.217
	I find that a consistent routine enables me to enjoy life more.	.281
DTI- Preference for Dichotomy	It works out best when even ambiguous things are made clear-cut	.306
	It feels good when boundaries are clear for all things	.328
	I want to clarify whether things are good or bad	.365

Note. *N*=440. (R) indicates that a value was reverse scored.
BIDR= Balanced Inventory of Desired Reporting. FAD+= Free Will and Determinism Plus. DTI= Dichotomous Thinking Inventory. Cases with missing values were excluded listwise. Citations for the scales appear in Table 2.

Table 13**.**

Pearson Correlations between Long-form and Short-form Factors, Big Five Traits, and Self-reported Unethical Decisions and Prosocial Donations

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19.
1. F1: Moral Agency	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__
2. F2: Dogmatism	-.052	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__
3. F3: Empathy	.352***	.097*	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__
4. F4: Avoidant Emotionality	-.112*	.118*	-.044	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__
5. F5 :Lightness	-.274***	-.035	-.351***	-.035	__	__	__	__	__	__	__	__	__	__	__	__	__	__	__
6. F6: Moral Reductionism	.202***	.211***	.326***	.070	-.312***	___	__	__	__	__	__	__	__	__	__	__	__	__	__
7. S1 :Moral Agency	.866***	.085	.335***	-.217***	-.281***	.266***	__	__	__	__	__	__	__	__	__	__	__	__	__
8. S2: Dogmatism	-.057	.914***	.057	.135**	-.029	.194***	.082	__	__	__	__	__	__	__	__	__	__	__	__
9. S3: Empathy	.336***	.141**	.971***	.003	-.345***	.314***	.330***	.115*	__	__	__	__	__	__	__	__	__	__	__
10. S4: Avoidant Emotionality	-.158**	.131**	-.049	.956**	.014	.051	-.258***	.156**	-.001	__	__	__	__	__	__	__	__	__	__
11. S5: Lightness	-.217**	-.002	-.333***	-.121*	.901***	-.308***	-.197***	.014	-.329***	-.071	__	__	__	__	__	__	__	__	__
12. S6: Moral Reductionism	.063	.341***	.182***	-.104*	-.067	.661***	.218***	.337***	.180***	-.092	-.027	__	__	__	__	__	__	__	__
13. Openness	.164***	-.289***	.283***	-.336***	-.155**	-.085	.148**	-.317***	.244***	-.320***	-.163**	-.177***	__	__	__	__	__	__	__
14. Conscientiousness	.251***	.154**	.196***	-.387***	-.278***	.359***	.446***	.104*	.176***	-.408***	-.187***	.414***	.119*	__	__	__	__	__	__
15. Extraversion	-.230***	.221***	.114*	-.329***	.238***	-.080	-.139**	.201***	.105*	-.274***	.310***	.145**	.002	.094*	__	___	__	__	__
16. Agreeableness	.271***	.113*	.243***	-.225***	.089	-.056	.364***	.133**	.264***	-.224***	.143**	.062	.069	.076	.176***	__	__	__	__
17. Emotionality	.342***	.108*	.345***	.359***	-.425***	.310***	.343***	.078	.368***	.273***	-.448***	.070	-.019	.171***	-.212***	-.045	__	__	__
18. Unethical Decision Making	-.430***	-.141**	-.121*	.121*	.073	-.211***	-.472***	-.168***	-.134**	.127**	.032	-.246***	-.103*	-.216***	.086	-.202***	-.077	__	__
19. Donation Likelihood	.151**	-.066	.309***	-.038	-.148**	.067	.145**	-.048	.285***	-.030	-.145**	-.045	.128**	-.002	-.076	.005	.091	-.087	__

*$p < .05$ **$p < .01$ ***$p < .001$

Note. N=449 for all correlations. Unethical Decision Making is measured using the Unethical Decision Making Questionnaire (Detert, Treviño & Sweitzer, 2008). Donation Likelihood is measured from the Donation Scenario (Bozeman, 2015). Citations for all other scales appear in Table 2.

Table 14.

Short-form Factor scores: Regressions Predicting Unethical Behavior or Prosocial Donation

Unethical Decision Making				Donation Scenario			
	Cumulative R^2	ΔR^2	β		Cumulative R^2	ΔR^2	β
Step 1	.256***	.256***		Step 1	.101***	.101***	
S1: Moral Agency			-.456***	S1: Moral Agency			.067
S2: Dogmatism			-.094*	S2: Dogmatism			-.049
S3: Empathy			.034	S3: Empathy			.270***
S4: Avoidant Emotionality			.009	S4: Avoidant Emotionality			-.017
S5: Lightness			-.048	S5: Lightness			-.046
S6: Moral Reductionism			-.121**	S6: Moral Reductionism			-.095
Step 2	.269***	.013**		Step 2	.118***	.017**	
S2: Dogmatism X S5: Lightness			-.116**	S1: Honesty X S4: Avoidant Emotionality			-.133**

*$p < .05$ **$p < .01$ ***$p < .001$

Note. N=449. All short-form factors were entered in step 1 and each significant interaction was entered subsequently with a criterion of $p \leq .05$.

Table 15.

Regressions Predicting Unethical Decisions or Prosocial Donation: Short-form Factors with Significant Big Five traits entered

Unethical Decision Making				Donation Scenario			
	Cumulative R^2	ΔR^2	β		Cumulative R^2	ΔR^2	β
Step 1	.256***	.256***		Step 1	.101***	.101***	
S1: Honesty			-.457***	Honesty			.066
S2: Dogmatism			-.096*	Dogmatism			-.050
S3: Empathy			.034	Empathy			.270***
S4: Avoidant Emotionality			.009	Avoidant Emotionality			-.017
S5: Lightness			-.049	Lightness			-.047
S6: Self-Deception			-.120**	Self-Deception			-.093
Step 2	.270***	.014**		Step 2	.118***	.017**	
Openness			-.141**	Honesty X Avoidant Emotionality			-.133**
Step 3	.278***	.008*					
Extroversion			-.106*				
Step 4	.290***	.012**					
S2: Dogmatism X S5:Lightness			-.115**				

*$p < .05$ **$p < .01$ ***$p < .001$

Note. N=449 All short-form factors were entered in Step 1. Each significant Big Five trait, as measured by the HEXACO (Lee & Ashton, 2004), was entered in subsequent steps, and each significant interaction between the six short-form factors was entered as a final step. All additions had a criterion of $p \leq .05$.

Table 16:

Regressions Predicting Unethical Decisions or Prosocial Donation: Big Five Traits with Significant Short-form Factors Entered

Unethical Decision Making				Donation Scenario			
	Cumulative R^2	ΔR^2	β		Cumulative R^2	ΔR^2	β
Step 1	.106***	.106***		Step 1	.029*	.029*	
Openness			-.066	Openness			.133**
Conscientiousness			-.201***	Conscientiousness			-.028
Extroversion			.136**	Extroversion			-.058*
Agreeableness			-.208***	Agreeableness			.012
Emotionality			-.024	Emotionality			.086
Step 2	.234***	.128***		Step 2	.103***	.074***	
S1: Honesty			-.476***	S3: Empathy			.323***
Step 3	.264***	.030***		Step 3	.113***	.009*	
S2: Dogmatism			-.199***	S1: Honesty			.130*
Step 4	.280***	.016**					
S6: Self-Deception			-.144**				

Note. N=449 Big Five traits, as measured by the HEXACO (Lee & Ashton, 2004), were entered in Step 1, and each significant short-form factor was entered in subsequent steps with a criterion of $p \leq .05$.

*$p < .05$ **$p < .01$ ***$p < .001$

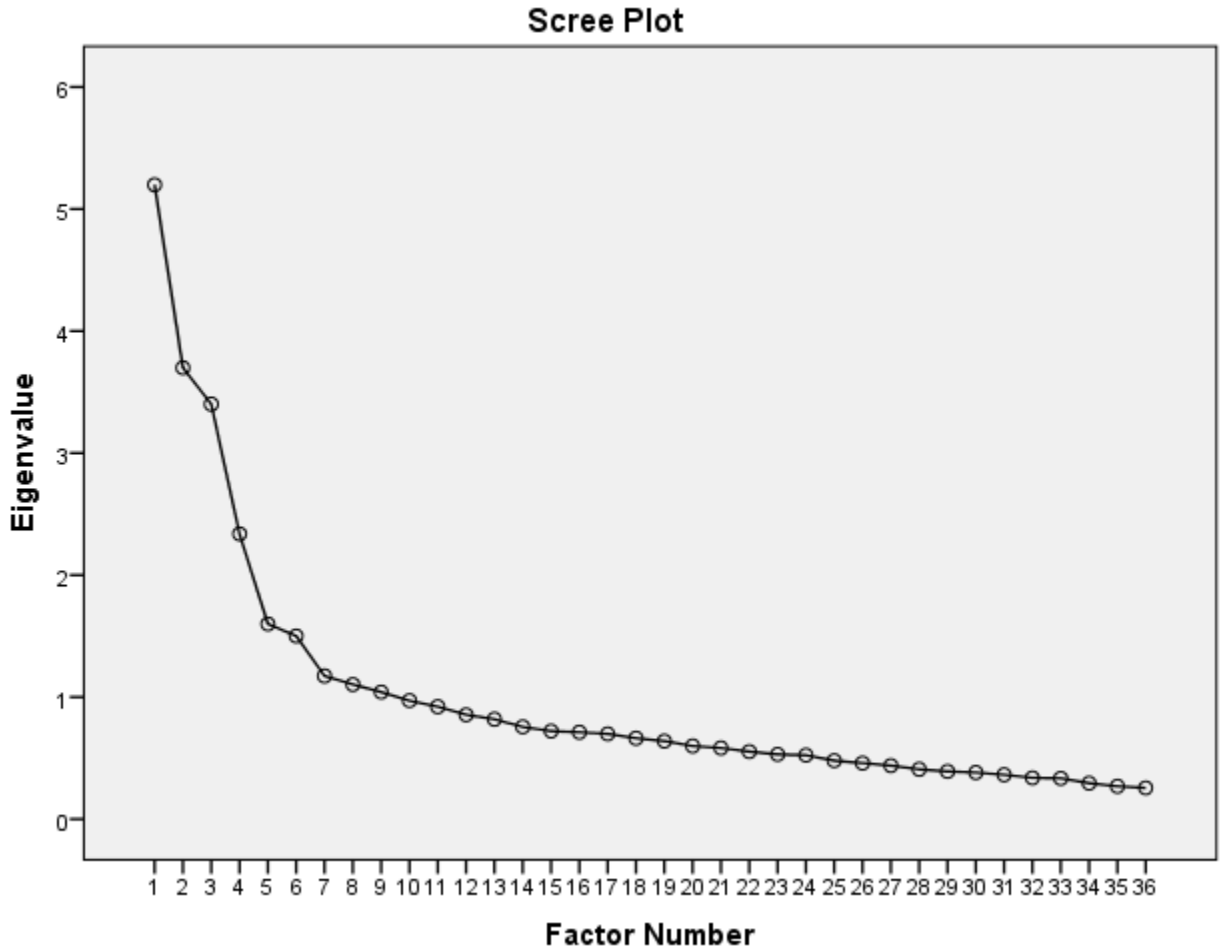


Figure 1. Scree Plot of Eigenvalues from Maximum Likelihood Factor Analysis with a Promax Rotation

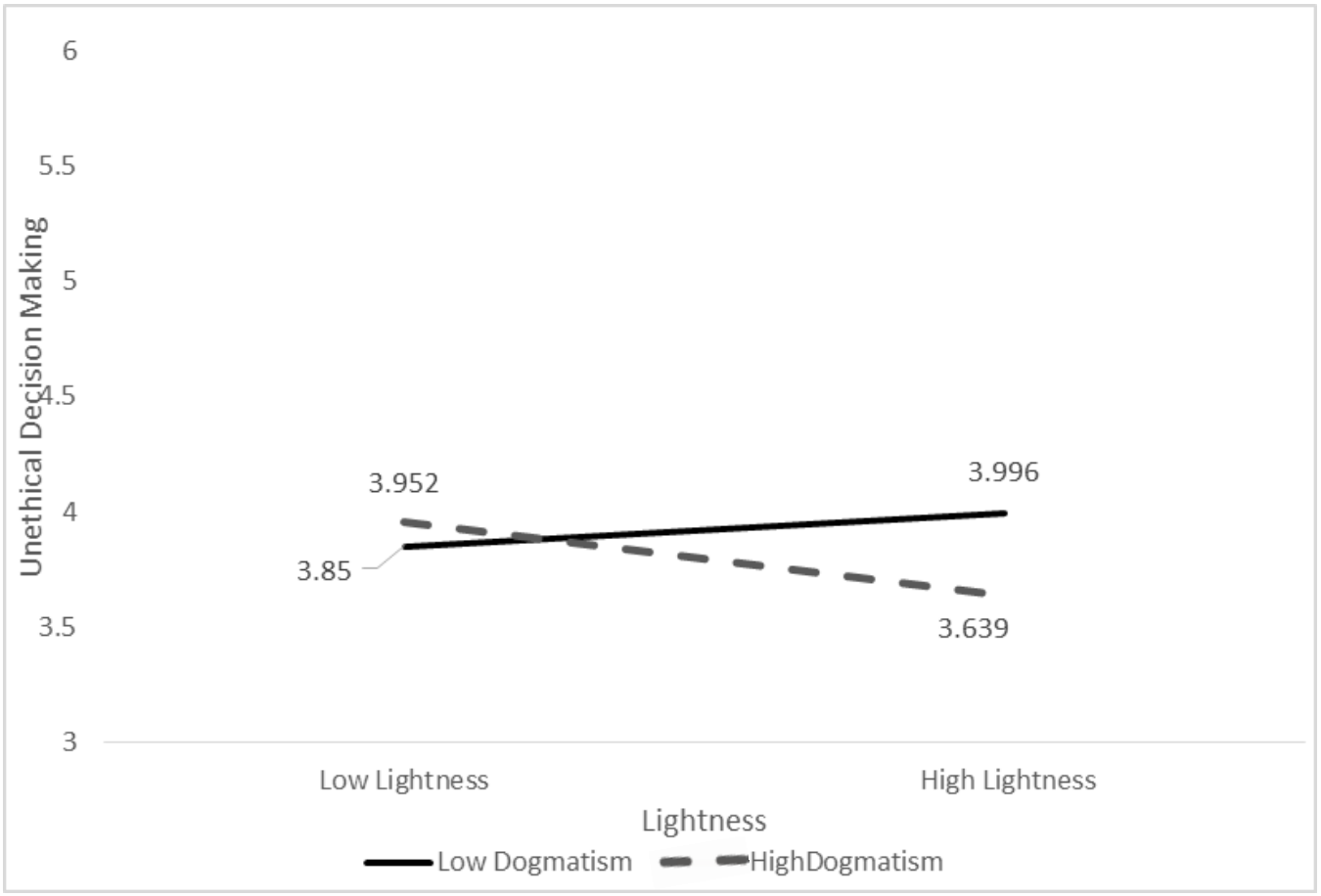


Figure 2. Interaction Between Dogmatism and Lightness in Predicting Unethical Decision Making

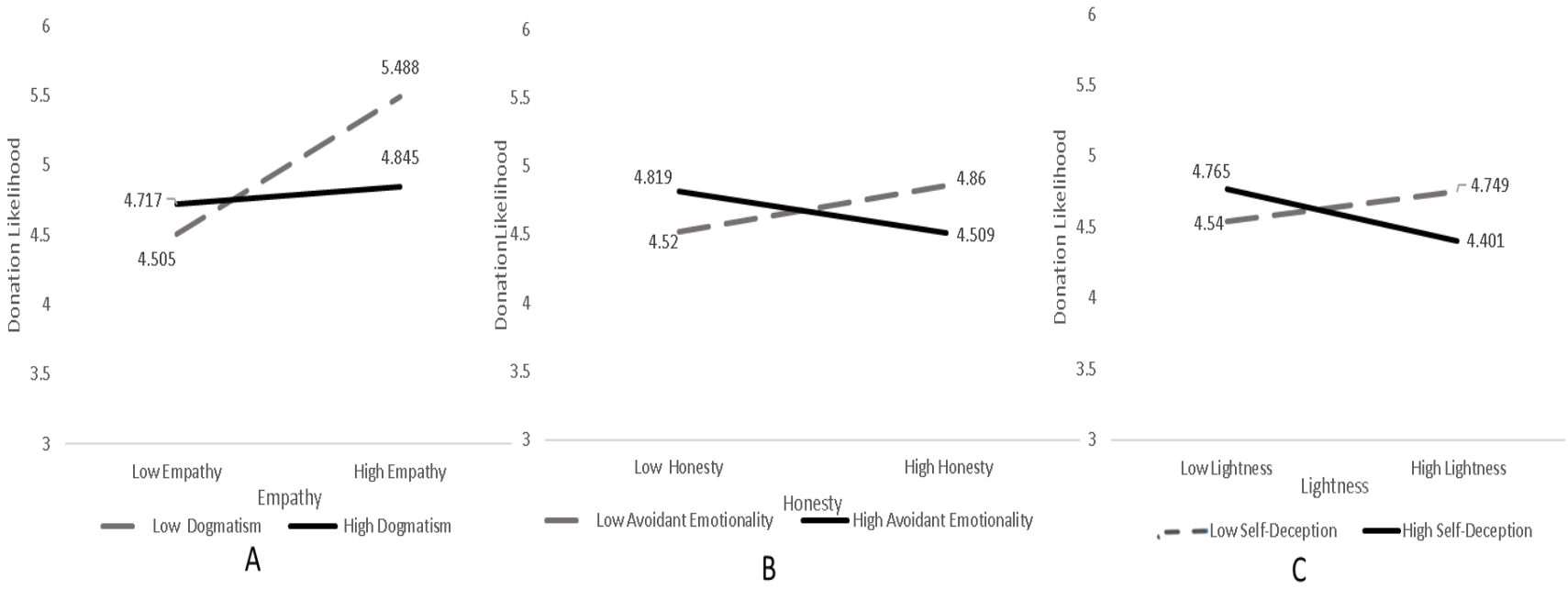


Figure 3. Donation Likelihood Interactions.

Figure 3A depicts the interaction between F3: Empathy and F2: Dogmatism. Figure 3B depicts the interaction between F1: Moral